

THE
PHRENOLOGICAL JOURNAL,

AND
MAGAZINE OF MORAL SCIENCE,
FOR THE YEAR 1845.

VOL. XVIII.

OR

VOL. VIII. OF THE NEW SERIES.

Quiconque a une trop haute idée de la force et de la justesse de ses raisonnemens pour se croire obligé de les soumettre à une expérience mille et mille fois répétée, ne perfectionnera jamais la physiologie du cerveau.—GALL.

The first business of philosophy is to account for things as they are; and till our theories will do this, they ought not to be the ground of any practical conclusion.—MALTHUS.

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THE
PHRENOLOGICAL JOURNAL.
No. LXXXII.

JANUARY, 1845.

NEW SERIES.—No. XXIX.

L. MISCELLANEOUS PAPERS.

I. Illustrations of the Functions of the Organ of Size.
By Mr E. J. HYTCHE.

AMONG the cerebral organs, one of the most important, and yet the most difficult to trace, is that which appreciates the dimensions of physical objects, and measures the space which intervenes between one body and another. Little, however, of positive evidence has been adduced in favour of the site assigned, and probably less has been submitted to shew its radical function. Nor is this strange. There are great impediments even to mere observation, arising chiefly from the unequal thickness of the superciliary ridge, and from the encroachments of the frontal sinus. Again, a metaphysical difficulty attends the study of this organ; for as shape and magnitude are blended in every object, it is difficult to separate and define the essential features of each. Nevertheless, lengthened observation has indicated the correctness of Spurzheim's opinion; and the more nature has been appealed to, the more clearly has it been seen that shape and magnitude are distinct qualities, and, therefore, that the perception of the one does not imply the appreciation of the other.

The objections which have been made to the existence of this organ are many; but all are resolvable into those of a

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A

metaphysical character, Not one *fact* has yet been adduced to shew that the site marked on the bust is incorrect. But while we have appealed to the cerebral indications in support of our position, the critic has been content to adduce another species of evidence,—namely, that derived from self-inspection,—the competence of which we deny. The metaphysical objections to the existence of the organ of Size are well exemplified in an article on Combe's *Outlines*, contained in the *Quarterly Review* (vol. lvii. p. 172), and the citation of which will convey to the reader all that our adversaries can say against the existence of the organ. "We have," says the writer, "both Form and Size : in the language of metaphysics, a knowledge of extension includes the two. For what is form but the comparative extension of the several parts of the same object ? or size, but the comparative extension of two several objects ?" In this attempt at analysis, the critic seems to have confounded the two distinct qualities, shape and magnitude, by arguing that, because they are necessarily connected, they are but one. Now, granting that form can never be disconnected from size, this does not prove that magnitude and shape are one and the same quality. For a concise refutation of the theory, we have only to appeal to nature. Extension can convey no idea of shape ; because matter of a given magnitude can be of any possible form : and, in like manner, two objects of the same shape may widely differ in size.

Mr Hay has so well discriminated and defined the qualities which constitute physical magnitude, that to indicate the existence of size, as a natural and appreciable quality, there is only occasion to cite his analysis. He says,* that "proportion may be in the relative size of two or more objects ; the relative dimension that the length bears to the breadth of an object ; the relative obtusity or acuteness of various angles ; the relative classes of curvature in various objects, or in the parts of an object." Distinct, then, as is the quality of physical magnitude, we might infer that for its perception a distinct organ would be assigned, seeing that for every other distinctive natural feature a special cognizer has been discovered.

For the correctness of this inference I need merely refer to the cerebral conformation, and to the characteristics, of men. For although there are but few persons who cannot appreciate great differences in dimensions, as, for instance, between an apple and a fly ; yet, when the appreciation of

* On Proportion, pp. 1 and 2.

the more minute shades is requisite, then hesitancy and difference in judgment generally ensue. Moreover, when the test is carried farther, we shall find one man readily appreciating magnitude but not form, while another, who fails in estimating dimension, perceives minute differences of form at a glance. Manipulation, however, gives the clue; for the one possesses large Size but small Form, while the other has the converse organization.

In the course of observation, I have met with persons who are instinctively addicted to estimating comparative magnitudes; who cannot regard two objects without an instant eye-measurement, and who experience as much delight therein as others derive from the appreciation of beautiful forms. I am acquainted with two persons in whom the organs of Form and Size are both large; they display equal judgment in the determination of shape and magnitude, and readily discriminate the radical quality of each. One curious illustration of the practical application of Size may be noticed. In crossing roads where carriages were passing, they have been apparently so wedged in that the passengers have expected to see them crushed. But the space necessarily occupied by the body has been so accurately measured that they have passed safely through, although there was but a line's breadth between them and death. In this instance there was no temerity; both are extremely fearful, but Cautiousness was inactive because they knew their power. Miss Sedgwick, in her *Letters from Abroad*, mentions a similar case. When noticing the crowded streets of Rome during the carnival, she says—"You fear we shall trample down some of the people in this crowd: there is no danger: the coachmen are accustomed to driving through full streets; and the people so well know how to take care of themselves, that they never move till the horses' hoofs are close upon them." It is impossible to refer this power to any organ but Size, seeing that there is exhibited an accurate judgment of the space which the body must occupy to allow the vehicle to pass without injury. This is confirmed by the fact, that the Italians possess large organs of Size. A similar illustration may be drawn from the navigation of the Thames. It is well known, that, from its comparative narrowness, and from the accumulation and continual passage of vessels, no navigation is more difficult than that of the Pool below London Bridge; yet accidents rarely occur. The vessels close upon each other; collision is feared by the novice; but the distance requisite to preclude danger is so well measured, that the ves-

sels pass each other safely. In the captains and pilots of the Thames the organ of Size is well marked.

Without this organ the power of writing could scarcely be attained. Form, doubtless, is the organ which invents and appreciates written symbols; but the executive art would be very defective without the assistance of Size. Thus, without Size every portion of a letter would be equally thick; for though Form might indicate a specific curve, it would not suggest the propriety of giving different proportions to the different parts of a letter. In examining the penmanship of writers who possess large organs of Size, we find the up-strokes and down-strokes of a defined thickness; the same graduation is preserved throughout, and consequently there is a precision and delicacy which mere Form could never impart. But on contrasting the writing of those who are deficient in the organ, we find the letters most unequal in thickness, and a jaggedness which precludes any idea of beauty. To the organ of Size is also due the production of uniformity in the height and length of letters, since there might be correctness in shape while the letters were unequal in magnitude. Moreover, from Size springs the desire of preserving an equal space between letter and letter, and between line and line. Many cannot write straight, but yet form their letters well; while the strange unreadable hands of others are noticeable for the straightness and equal distance of the lines. In persons who possess this power of straight writing the organ of Size will be found large.

Mr Lalor recommends the special training of this faculty in children. He says,* that "amongst the properties of external objects of which the child obtains the knowledge by his senses, his attention may be early directed to their size and distance, and he will readily take in the simple ideas of measurement. He will have no difficulty in finding one thing larger than another. His eye and hand should be exercised in measuring, and the engagement of both will interest him, and gratify the impulse to mental and bodily activity which is almost incessant in childhood." In addition to that necessary training of Size which is involved in penmanship, the end could be attained even in the play-ground. In fact, that scheme of education is very meagre which does not regard the play-ground as a school of mental as well as of physical culture. For instance, as respects the organ of Size, when a boy is throwing, eye-measurement is requisite, or there could

* Education: Prize Essays, p. 22.

be no idea of the distance to be traversed. So, in cricketing and fencing, a knowledge of the dimension of the space between one spot and another is a prerequisite, or the mark could not be reached.

On the service of Size to the artist, it is scarcely necessary to dilate. The very power of representing objects as they are—giving the comparative dimension of each part—implies the power of appreciating graduated magnitudes. Without the aid of Size, the outline of bodies might be accurately depicted; but there would be no certainty that pigmies might not be delineated as giants, mountains be reduced to hillocks, and children be made as tall as men. Moreover, graduated size being the chief element in perspective, landscape-painting could not exist were there no such faculty as that under discussion. The result of deficiency in this faculty is exemplified in the paintings of the Chinese, whose organs of Imitation and Form are larger than those of Size. Lord Jocelyn writes as follows:—"Since I have seen many of the houses and temples of the Chinese, the paintings on the old china struck me as the best delineation of their buildings and figures: it is wonderful how correct they are in the main features." As, then, the Chinese possess so great an aptitude for the delineation of the outline of objects, did we confound magnitude with shape, we should expect to see an excellent appreciation of landscape, or, at least, the power of correct proportionment. But on looking at their porcelain, or any production of Chinese art, we find no trace of the knowledge of perspective: almost every object is portrayed of the same or disproportionate size; and objects which ought to be situate in the back-ground intermix and interfere with the action of those in the fore-ground. A converse illustration may be derived from Egyptian art; for Size appears to have been more cultivated than Form. One monotonous style pervades the Egyptian structures: to view one building is to obtain a type of the remaining; and instead of graceful curves, and variety in shape, we find a continuous recurrence of jutting angularities, which would tire the eye were it not for their gigantic proportions. Haydon thinks that the ancient Egyptians did not study anatomy; and if the absence of flexure and variety be criteria, his inference seems correct. But, little as they were endowed with the power of appreciating the beautiful in form, they excelled in judgment of size: not merely did they succeed in originating immense structures, but every portion of the erection is nicely proportioned, and the parallelism is complete. In the Greeks, however, we find the full manifestation and combination of both

Form and Size. In their statues we have the very perfection of the human form and proportions. Probably for no quality is Grecian art more conspicuous than for the appreciation of comparative magnitude. Every portion of an object is accurately graduated; and had I to indicate the exemplification of a refined sense of size, I would at once point to the Elgin marbles in the British museum. In accordance with these facts, the heads of eminent modern painters and sculptors indicate large organs of Size.

After Form, the organ of Size is no mean element in the discrimination of external objects. It is probable that a person accustomed to cognize the branches and foliage of trees, if he possessed a large organ of Form, would be able to discriminate one tree from another. But inasmuch as every tree of the same species has but one kind of foliage, and generally but one mode of out-branching, the observer would be liable to confound two trees of the same species from this general similarity. Hence, then, Size would render much assistance. For, in addition to the outline, the comparative magnitude would be cognized; and the thickness of the aged oak, and its greater height, would preclude its being confounded with the thin and tender sapling. In woodmen the organ of Size is usually well developed.—And the same remark is applicable to the discrimination of persons. We instinctively say that such a person is tall or short, thin or stout; and were a change in this respect suddenly to occur, our power of recognition would be very feeble, if not destroyed. Size, then, has its office to perform in discriminating persons; and those who have the organ largely developed, have a tendency to compare the sizes of different individuals, or are remarkable for their judgment in this particular.

A good endowment of the organ of Size seems essential to a good phrenological manipulator. Comparison in size is the very element of the practice, and it is especially to the power conferred by the organ we are treating of, that the skill of Gall must be ascribed. Possessing only a moderate development of Form, and little able to discriminate localities, he seemed very unfit for phrenological observation, and might be cited as an apt exemplification of the "pursuit of knowledge under difficulties." Yet, in addition to collecting the chief facts upon which our science is based, he has been equalled by few as a manipulator. In his head the organ of Size was largely developed; and as he possessed an accurate perception of difference in magnitude, his opinion of the comparative development of an organ was generally well founded. Many phrenologists, and those not merely the theoretical

class, leave the organs over the superciliary ridge unnoticed, and that because they are unable to detect the comparative development of those minute organs. It is to this source I am inclined to ascribe the comparatively little information we have on the functions of the perceptive organs; for I have found that those organs have been observed only by such as possessed eminent power of comparing magnitudes. Judgment in size does not, however, preclude mistakes in *estimating character*; but when the decision is incorrect in this particular, the error will be found to arise from defect of power to appreciate the influence of the organs when in combination—a power which implies no slight degree of reflection.

By Size, partly, it is that we judge the value of coins; we discriminate the half-crown from the shilling by the bulk, as much as by the weight. In merely looking at coins of the same metal and device, but of different values, we could have no perception of their difference but for possessing the organ of Size.

Dr Vimont considers that there is a distinct organ for the cognizance of "distance." It appears to me, however, that distance involves the very essence of magnitude. In cognizing "distance," we merely regard the space between us and the object in prospect; and this space, or unoccupied ground, is, in fact, merely a neutral ground, and as such possesses dimension just as does an object within our grasp, and therefore measureable. Thus, then, in judging of space, we employ Size; and, as far as my observations indicate, good judges of distance possess large organs of that faculty. It is obvious, however, that in appreciating "distance," there is cognizance of more than dimension—we have a clear and definite view of the locality in the far prospect. Unless, therefore, to the estimation of the space there be added a certain conception of the goal, for practical purposes the power of Size would be lessened, inasmuch as the accurate conception of "distance" implies a certainty of the wherefrom and the whereto, and the space included therein. It may be, that want of due consideration of the connection of Locality with Size in appreciating "distance," has led Dr Vimont to his inference. For I should not hesitate in predicating of a person who, though he had large Size, possessed a moderate organ of Locality, that he would not be a good judge of "distance."

An example may be cited which seems to support this conclusion. In throwing, the influence of Size is very conspicuous. Locality indicates the point to be reached; Weight cognizes and imparts the momentum requisite to reach the

goal; but these would be inefficient agents were there not superadded a knowledge of the space to be traversed. This desideratum is supplied by Size, which, accordingly, is found large in cricketeers and hurlers, and also in pugilists, whom it doubtlessly aids in warding off and planting blows. Whenever persons with large Size and Locality are found bad hurlers, it is occasioned by deficient Weight. They calculate the proper distance, but cannot impart sufficient momentum to project the missile to the mark. Others, again, have power to throw a body to any prescribed spot, and yet fail; their organs of Size being small, they have no accurate conception of distance, and the object either is projected beyond or does not reach the mark.

Like the other perceptive faculties, Size is liable to deranged action through excitement or disease. Thus, during the temporary insanity called drunkenness, its action becomes morbid in no slight degree. Objects appear to blend together; the large becomes small, or the small is magnified; and there is often a thorough incapability rightly to employ the adjectives larger and less. So during dreams, especially those occasioned by indigestion, Size is often similarly affected. This is also the case with the half-dreaming called vision-seeing. One person with whom I am acquainted rarely saw spectra of a natural size; all were reduced to pigmies, but nicely proportioned. Another always found the size of the spectrum to enlarge or diminish according to his proximity or distance. Others, again, find the spectra magnified to gigantic dimensions; and their conceptions and their eye-power of contemplating the vast, appear to increase. Mr De Quincey seems to have had the organ of Size morbidly affected during that fearful reaction which followed his opium-diet, and which he has so graphically depicted. He says,* that "the sense of space, and, in the end, the sense of time, were both painfully affected. Buildings, landscapes, &c., were exhibited in proportions so vast as the bodily eye is not fitted to receive; and space swelled and was amplified to an extent of unutterable infinity." Other instances might be cited to shew the liability of Size to morbid action; and had we no other *presumptive* evidence of the existence of an organ of this faculty, the inference derivable from diseased manifestation would suffice.

The influence of the organ of Size in mechanical pursuits may be briefly noticed. No organ is so serviceable in preventing waste of material. Estimating the wages of an ope-

* *Diary of an Opium-Eater*, 2d Ed., p. 159.

rative not only by the sum which he receives, but by his economy of the material supplied—the possession of a large organ of Size is of great value. For instance in sawing, the carpenter in whom Size is well developed will divide the wood so equally, that there are no jagged pieces to be adzed off, and thus there is no waste of material. Farther, no small portion of his work consists in fashioning two separate equal parts to be afterwards grooved together; and hence the work would be spoiled were the equality not preserved. Carpenters, as a class, possess large organs of Size. Tailors also illustrate this use of the faculty. In cutting out the cloth a good appreciation of dimensions can save much, while a bad size-judger will waste a large proportion of the material supplied. Fancy-painters also exemplify the development and manifestation of this organ. Not only have they to imitate the outline of the grains of wood, but, inasmuch as the grain of each class of wood varies in thickness, the exact size must be represented. The influence of this organ is also traceable in bookbinding, especially in the lettering department; for without its aid there would be unequal spaces between letter and letter, and line and line; and the ornaments selected must be applicable to the size of the book. Observation, as might be inferred, indicates that skilful fancy-painters and bookbinders possess large organs of Size.

In considering the influence of Size, a sketch of its connection with sublimity cannot be avoided. Whether Mr Combe's opinion be correct or not, that the sublime is evolved by a special organ; or whether the feeling be constituted by the combined action of Ideality and Wonder, as I am disposed to consider; still the *modes* of its manifestation are diverse, and indicate the co-operation of various intellectual organs. Thus, there may be sublimity in the dense gloom of impenetrable abysses; in the roaring cataract, unchecked by the jutting crag over which its waste of waters is impelled; or in its grandest and rarest manifestation, the heroism of self-sacrifice. But of all the constituents of sublimity, none surpasses that which is derived from the perception of magnitude. In the external sublime, the vast is the principal element; and hence the idea of the sublime cannot be divorced from that of the mighty. Burke has clearly deduced this feature of sublimity. He says,* that "greatness of dimension is a powerful source of the sublime. Extension is either in length, height, or depth. Of these the length strikes the least; for a hundred yards of even ground

* On the Sublime, sect. 8, on Vastness.

will never work such an effect as a tower an hundred yards high, or a rock or mountain of that altitude." In speaking of magnitude as a constituent of the external sublime, it is not asserted that *mere* vastness necessarily evolves the feeling. For it is obvious that a plain, however vast its extent, cannot produce the same effect as a jagged precipice, although the latter be comparatively smaller. So also, those stupendous pagoda-crowned gateways which are the summit of Hindoo art do not awaken the sense of sublimity; for, covered as they are with grotesque carving, and the very form being vulgar in the extreme, the impressions aroused by their magnitude are dulled by the prevalent ill taste. But when we regard the Jungfrau or Mont Blanc, towering up, giant-like, to the still heavens, and surrounded by dense masses of mountain broken into every form of beauty—then the feeling of sublimity has its birth, and its food.

And if size be an element of natural sublimity, its power is equally great in structural art. Burke says, that "to the sublime in building, greatness of dimension is requisite; for on a few parts, and those small, the imagination cannot rise to any idea of infinity." York Minster would retain its beauty were it much smaller, but then the grand would vanish. In Martin's "*Belshazzar's Feast*," there are vast buildings and colonnades, stretching out as far as the eye can reach; and the vast and the illimitable combine to produce a scene of unequalled sublimity. But diminish this vastness, and the sublimity will disappear.

Now, to appreciate the sublimity of magnitude, the large development of Size appears indispensable. There may be the highest capacity of *emotional* sublimity, but that will not supply the want of the organ of Size, without whose agency there cannot be even a perception of magnitude. Hence we often find, that, with an exalted appreciation of the moral sublime, there are persons in whom the craggy precipice, and the stupendous mountain, awaken no emotion. In the few cases which I have noticed, where the sense of the vast sublime prevailed, the organ of Size predominated; and it is probable that where the conception is wanting, Size is deficient. At all events, sublimity cannot exist in nature of itself, but must be a reflex of the feelings of the observer; for, to use the words of Carlyle—"the eye sees in all things what it brought with it the means of seeing."

12 BRUNSWICK TERRACE, ISLINGTON,
August 10. 1844.

II. *Outline of a Lecture delivered to the Sheffield Phrenological Society, at the commencement of the Third Session, October 9. 1844, by CORDEN THOMPSON, M.D., President of the Society, and Senior Physician to the Sheffield General Infirmary.*

GENTLEMEN,—In a lecture delivered two years ago before this Society,* it was my object to shew that the intellectual and moral faculties are innate, the same in kind in all, but differing in degree; and that, although they are susceptible of improvement by cultivation, all men are not capable of the same proficiency. Some have peculiar talents: education is not a creative, but a modifying power, and differences of character shew themselves too early in life to be the result of such a cause. Each man, whatever his station, has his individual character, which nothing can destroy; it may be modified, however, and the main power is education. Education would be useless, if there were not faculties to draw forth. If all men were naturally alike, education ought to produce the same result in all. Goethe has remarked on the vast importance of industry, but yet its effects must depend on the pre-existence of innate faculties. Dr Vicesimus Knox wrote one of his *Winter Evenings* on the impolicy of introducing incorrigible dunces into the learned professions. Such dunces can no more be aroused by education, than the blind can avail themselves of light to see. Dr Knox wrote from experience; but if he had been a phrenologist, what abuse would have been showered upon him for this remark, as if it were less wise to read the book of nature than the puny works of men! Mr Wilderspin, the celebrated educator, also, attests the necessity of innate genius to produce distinguished characters. But how are the innate faculties connected with the organization? This is the subject of the present lecture, and any view of Man, that does not regard this connexion, must be imperfect. The innateness of the faculties, and their connexion with the organization, are fundamental principles of Phrenology, and this has given rise to the idle charge of Materialism. The mutual influence of mind and body is admitted by all sorts of writers, theological and metaphysical. They all acknowledge, also, that the brain is the organ of the mind; and the phrenologist adds that the brain is not simple, but a combination of organs. In each case, so far as materiality of connexion is concerned, there is no differ-

* Noticed in vol. xvi., p. 91. The lecture, of which an imperfect sketch is given above, occupied nearly two hours in delivery.—ED.

ence, and, therefore, the opponents of Phrenology are as much chargeable with Materialism as the phrenologists themselves. The phrenologist confines himself to the manifestations of mind through the bodily organs. He does not enter into the questions of the essence and nature of mind. The manifestations of mind must be affected by what affects its organs; and as they are perfect or defective, healthy or diseased, the manifestations must correspond. No changes affect the manifestations of mind more than the stages of growth, maturity, and decay. The body and the manifestations of the mind grow, mature, and decay together. These changes steal upon us gradually and silently, so that from the ardour of youth to the imbecility of age, the progress is almost imperceptible. Some have simply made two divisions of human life, into growth and decay. Aristotle adopted three stages—growth, maturity, and decay; while some of the Grecian philosophers divided life into periods of five, and others of seven years, which latter number has been recognised in our laws. The various transition periods follow each other with constancy, but the time of each is variable. In some, evolution is rapid, in others tardy, and in some it is affected by various circumstances. The life of the fœtus in the womb is that of mere vegetation. At birth, stimulated by light, oxygen, &c., the organs, prepared up to a certain point, are called into active exercise. Thus begins a state of partial consciousness. The being has undergone a complete revolution; sensation and voluntary motion appear, but consciousness, for some weeks, is but partial. The first mental manifestations are of a purely instinctive character. The hours are dozed away, but nature is busily at work, and rapid progress is made. Sight, hearing, and the other senses, only gradually acquire activity. The organs are perfect in form, but the nervous system within arrives only gradually at a proper development. Pleasure and pain, however, are from the first evinced in the grateful reception of the maternal breast, and in the struggles against the offices of the nurse. After some weeks, sight, touch, taste, smell, and hearing, begin to develop themselves with increasing power. The impressions of early infancy are so transient, that no recollection of them is retained; and yet what wonders does the infant perceive! In this stage of existence, mind and body are equally imbecile, and all men at that age are alike. So weak is the organization, that life is held by a thread, as is attested by the fact, that throughout Europe, one child in five perishes in the first year of life. At the end of six months, the child begins to recognise persons and objects, but scarce-

ly an indication yet appears of the higher faculties of man. For some time, the child's expressions are by gestures only. About the end of the first year the child begins to stand, and next to walk, which task in a few months is mastered. The first efforts to speak are contemporaneous with this. Sounds, at first inarticulate, but by imitation, begin to form words. When, by frequent efforts, power is acquired, its exercise is a great source of pleasure. The reasoning of infants is instinctive, like that of animals. Infancy, properly so called, lasts till the completion of the first dentition, about the third year. Then begins childhood, lasting till the completion of the second dentition; and this period, too, is marked by incessant activity, affording great gratification, and developing at once the body and mind. Reason advances slowly. To gain an acquaintance with objects and their relations, is the business of education at this period, and not to load the memory. The moral, as well as intellectual faculties, are to be cultivated. So great is the activity, at this time of life, that, as Mr Wilderspin remarks, inactivity in a child under six years old is incompatible with health. The mere action of the mental and bodily faculties is the highest gratification to childhood. Its movements are the spontaneous joyous outbreak of conscious powers. The exercise of the faculties is a gratification independent of ulterior objects. In the third or fourth year, the different tastes of the different sexes become apparent. At seven or eight, the distinctive genius of the child begins to appear. Next is to be marked the transition from childhood to puerility, lasting till the period of puberty. In this period, individuality of character, and the divarication of the sexes, become daily more apparent. This, like childhood, is a joyous period. The feelings at this time are strong impulses; and here is another proof of the powerful influence of organization. The characteristics of this period are the same in every sphere of life. The boy devoted to education in the dead languages, his memory loaded with abstractions, confined in an impure atmosphere, and subjected to the discipline of cramming, may well "creep, like a snail, unwillingly to school." Yet the moment the school portals open, the natural impulses of the boy resume their sway. The same result is seen in those who, from their earliest years, have to work for scanty food and ragged clothing. All these manifestations naturally arise from the daily expansion of the organs with an energy irrepressible. The inward impulses rise superior to all outward impediments. The lower feelings are strong, but somewhat held in check by the desire of knowing. The destruc-

tive and opposite impulses are not yet strong, nor has the desire of acquisition acquired its full power. Youth succeeds, extending from puberty to manhood and womanhood, which arrives in the female at the twentieth, and the male at the twenty-fourth year. At this period the organic development exercises a new and unwonted power. One great master passion rules, and makes a greater revolution than any before, except the change of birth. Feeling and thought now exercise activity unknown before. The imaginative and inventive genius awakes. Love and poetry walk hand in hand. There are dreams by day as well as by night. At the commencement of manhood, the muscular system acquires its greatest power, and there is a great advance in the moral and intellectual qualities. Bold and dangerous enterprise, generous sentiment, and the high spirit of independence, are the natural results of this change. At the twenty-fourth year, the frame, under ordinary circumstances, attains its highest power, and this is the period when conscious power puts forth its greatest energies for good or evil. At this period, whatever the object of life, there is a spirit of fervour and enthusiasm which no other period knows. This is the period of heroism, of the richest poetry, of scientific discovery. At this period, too, the tendency to crime exists in its highest energy. The greatest amount of crime is committed between twenty and thirty years of age. Before twenty years of age, crimes against property are in the greatest proportion; afterwards, crimes against the person predominate, and, as age advances, bold murder gives place to cunning and secret assassination. The statistics of insanity, as well as of crime, correspond with the laws of organic development. More men become insane from thirty to fifty than at any other period; and this is just the time when the mind, having acquired its full power, is subjected to the highest efforts. The same thing is true of suicide.

Having thus traced man to maturity, you have seen how the mind and the body advance together. The mind is unchangeable, but its organs are constantly undergoing change, and the manifestations of the mind are governed by specific laws, determinate and uniform as those which govern the world of matter. If this were not so, the foundations of society would be uprooted; all would become disorder, and social relations would be impossible.—The latter part of the subject, the mental manifestations in the later years of life, I shall reserve for another lecture.

III. *Reply to Mr W. R. Lowe's "Remarks on Mr Prideaux's Theory of Volition, as the cause of Phreno-Mesmeric Manifestations."* By Mr T. S. PRIDEAUX.*

In making a few observations on Mr Lowe's article, headed "Remarks on Mr Prideaux's Theory of Volition, as the cause of Phreno-Mesmeric Manifestations" (vol. xvii., p. 276), I must commence by remarking, that it appears to me calculated to produce a most erroneous idea of the nature, scope, and object of the paper to which it purports to reply. In fact, its perusal would induce the supposition that it was written in answer to an article headed "Volition adequate to explain all the phenomena of Mesmerism," rather than as a response to one in which this question was only introduced incidentally, and discussed quite as a subordinate to the main question at issue. The title of my communication was "The Fallacy of Phreno-Magnetism;" my *motive* in writing it was to make an effort to check the headlong career of hasty and unfounded assumption, in which it appeared to me many phrenologists were embarking; and my *direct object*, to demonstrate that we were in possession of no evidence sufficient to prove that the phenomena exhibited were proofs of the localities of the organs—not to establish what their cause really was.

Now, I have no more objection to discuss the extent to which mesmeric phenomena are dependent upon volition, than any other subject; but I cannot allow the question of the reality of Phreno-Mesmerism to be made contingent upon, or to be even by implication identified with, the question of the sufficiency or insufficiency of volition as an explanation of the phenomena. No one will venture to assert, volition being proved insufficient, *ergo* Phreno-Mesmerism is a truth; the two questions are essentially distinct, and blending them together is the surest means to introduce confusion into our ideas on the subject.

Though I believe volition to play a most important rôle in Mesmerism, I have never entertained on this subject the opinions attributed to me by Mr Lowe, viz., "that volition is sufficient to unravel the tangled web of Mesmerism," "is the sole agent at work," &c. In fact, in the very article to which Mr Lowe's is a reply, I have on every occasion, when specu-

* We have slightly abridged some portions of this article, without, it is hoped, materially injuring its substance.—ED.

lating on the probable cause of phreno-magnetic phenomena, referred to sympathy and volition conjointly.*

I am fully aware that a vast deal of most plausible evidence can be brought forward in support of Phreno-Mesmerism ; but yet, may not the opposing facts be so decisive as to turn the balance of probability against it, and to force us to disbelieve it, irrespectively of the question whether we can give an explanation of the seeming evidence in its favour ? Undoubtedly yes ; and such is, in my opinion, the case at present with Phreno-Mesmerism. I consider that the facts developed on the subject, regarded as a whole, are much more irreconcilable with the supposition of its truth, than with that of its falsity. That by touching lightly on the opposing facts, and enlarging on those of a contrary tendency, a very respectable case may be made out in its favour, I have never for a moment doubted ; and such, it appears to me, with all due deference to this gentleman, has been the plan pursued by Mr Lowe.

It is not a little curious, that whilst Mr Lowe appears to consider it incumbent upon those who oppose the truth of Phreno-Mesmerism to reconcile all the seeming evidence in its favour with their belief, he seems altogether to overlook the prior incumbency which devolves upon those who maintain its truth, to reconcile with such an assumption the numerous body of facts in existence of an opposite tendency ; which if they fail in doing, the question must be regarded as one remaining in abeyance, and perhaps also as one in which the opposing facts so much preponderate, as to render the affirmative highly improbable.

Even in Mr Lowe's own experience, certain facts have occurred, of which (now that he seems disposed to abandon the conclusions he once drew from them) it might have been expected that he would have offered a few words in explanation. In the Journal preceding the one in which my paper on " The Fallacy of Phreno-Mesmerism " was contained, there appeared an article from his pen on the " New Organs of Mr Spencer Hall," in which he says, " This class of investigators (to which, after much examination and thought, though once, perhaps, something more than a sceptic, I must now confess my adherence) deem mesmeric excitation, if not the only, at least the best, means of discovering and actually demonstrating the functions of the various portions of the mind's central apparatus—the grand tribunal before which the claims of every candidate for admission into the list of the primitive faculties can best be examined—the *experimen-*

* " All the phenomena testify to the influence of sympathy or volition." Page 164, line 17.

tum crucis which will decide more satisfactorily than the most elaborate reasonings the number and nature of those various simple organs which, in the complicated machinery of the brain, forge and evolve our various thoughts, feelings, and emotions." And a little farther on he observes, "The object of this article is, however, not to speak of belief, but to detail (and that not in a dogmatical spirit) some few experiments which I have witnessed, and which certainly prove one of two things; viz., either that Mesmerism *does not confirm Phrenology at all*, or that, *if it does, it establishes, in addition, the subdivision of most of our present organs.*" Mr Lowe next proceeds to detail cases shewing that Phreno-Mesmerism establishes certain subdivisions in the organs of Colour, Alimentiveness, Philoprogenitiveness, and Ideality.—The next number of the Journal, however, contained an account of some Phreno-Mesmeric experiments by Mr Brindley, the results of which were directly opposite to those of Mr Lowe.

These results, being, as they are, strictly in accordance with what I have before stated to be my experience of phreno-magnetic phenomena,—viz. that they were so contradictory as to neutralize each other,—do not, of course, surprise me. I merely see in them a confirmation of my opinion, that they have no more stable foundation than the imagination of the patient sympathizing with the fancies floating in the minds of the operator and spectators; but from Mr Lowe, who appears to regard as doubtful the conclusion he once drew from them, yet does not embrace his own alternative, viz. that Mesmerism either established these conclusions, or did not confirm Phrenology at all, some explanation might have been looked for. He, however, dismisses the subject without attempting to offer any—quietly observing, "The paper of Mr Brindley requires no very extended notice. His experiments, if they were carefully conducted, appear to militate against those mentioned by myself as suggesting the subdivision of many of our ascertained organs. Let such experiments be multiplied and carefully recorded by various operators, and we may then, perhaps, ere long be able satisfactorily to adjust the subject." I cannot, however, allow them to be dismissed so quickly from the scene. I must remind Mr Lowe that one fact can never destroy another, whatever may be the fate of the erroneous conclusions we are apt to draw from them. The phenomena elicited and recorded by Mr Lowe and Mr Brindley, are facts which have occurred,—must have had a cause,—and establish conclusions which cannot be avoided. Since the set of results obtained by one of these gentlemen is directly an-

tagonistic to that obtained by the other, one set at least must have been produced by some other cause than the application of a stimulus to the seat of the feelings manifested, and both these gentlemen assure us that they do not employ volition, and that their patients were ignorant of Phrenology. Here, then, we see the phenomena ordinarily termed phreno-mesmeric produced in patients ignorant of Phrenology, without the employment of volition, and by some other cause than the application of a stimulus to the seat of the feelings manifested. Let Mr Lowe assign this cause, and then shew us why it is not competent to explain other so-called phreno-mesmeric phenomena, upon which he still relies for establishing the reality of the science.

With regard to our not being able to explain the mode of transmission of the exciting influence to the organs, my opinions remain unchanged. The general idea of the phreno-mesmerisers as to the mode in which it is effected, is so improbable as to border on the absurd, necessitating, as it does, the supposition that, simultaneously with the practice of Phreno-Mesmerism, there becomes developed in the operator a tact so exquisite, as to enable him to project the exciting influence with just that degree of force requisite to penetrate the skull and integuments, without passing through and going beyond the external surface of the brain. As, however, in my former paper, I suggested a possible channel of transmission, viz., that a sensation might be produced on the scalp, which might be conveyed by the afferent nerves to the nervous centres, and from thence reflected to the organs excited; and, moreover, stated that, *a priori*, I could see no impossibility in Phreno-Magnetism, I will pass at once from the question of the mode of transmission, as one not essential to the immediate subject under discussion.

In reply to my objection, "that hundreds of individuals have practised Mesmerism during the last fifty years, and thousands of persons been mesmerised on all parts of their bodies, without the peculiar phenomena of the excitation of the cerebral organs once occurring *till the operators became phrenologists*," Mr Lowe observes, "This objection, I apprehend, may be disposed of in much the same way as a denial of the circulation of the blood, because it was not discovered before the time of Harvey." To my apprehension, however, it cannot be disposed of in any such manner. Mr Lowe's comparison is one of those superficial analogies with which writers so often mystify both themselves and their readers, and quite inapplicable to the case. My query was, not How is it that Phreno-Mesmerism was not discovered before? but, How is it (since I suppose I may assume that

the laws of nature have not changed) that, under similar circumstances, similar phenomena were not produced? We hear now of half a dozen boys being magnetised for the first time on one evening, and all of them displaying the phenomena of the excitation of the organs every time their heads chance to come in contact with any substance whatever. If, seated on a couch, they happen to recline sideways, and the sides of their heads come in contact with the arm, forthwith they start up in a sudden paroxysm of fury from excited Destructiveness, which, if the upper and back part of the head chance to be touched, becomes changed to a laughable exhibition of Self-Esteem, &c. Now, since it would be ridiculous to suppose that out of the thousands of persons who were magnetised before the year 1841, none had their heads supported or touched in any way; and since, besides this, we know very well that numbers had their heads magnetised in positions as various as the seat of the pain sought to be removed, and yet the so-called phreno-mesmeric phenomena never occurred (for we cannot suppose that such obstreperous and *striking* exhibitions as those of excited Destructiveness could have taken place without obtruding themselves on the notice of the operator), I argue that their cause cannot be those external circumstances to which they are usually attributed. This is sufficient for my argument; but I will volunteer a step farther, and, seeing results so different, inquire in what particular the recent experiments in Mesmerism attended with phreno-mesmeric phenomena, differ from those made anterior to 1841, and in which they did not occur. The only difference I can discover is, that the former class have been made by individuals whose minds have been imbued with certain peculiar ideas (possibly capable of exciting a suggestive influence on the minds of the patients), to which the operators in the latter class were strangers. Now, when we find a difference in the results obtained by two sets of experimenters, common sense dictates that we should attribute such difference to those circumstances in which the experiments conducted by the two classes differed, and not to those in which they agreed; and the soundness of this general inference is confirmed in the present instance by the known fact, that during the mesmeric trance the powers of sympathy and imagination become exalted to a degree quite extraordinary and preternatural.

Mr Lowe states it to be his opinion, that the circumstances attending the discovery of Phreno-Mesmerism are favourable to its truth; a view of the case I am so far from sharing, that to my eye they have always presented an aspect directly the reverse. Dr Collyer, the first discoverer, had

his mind occupied with the subject of Phrenology at the precise instant when the first supposed phreno-mesmeric phenomena developed themselves. "At a party where Mesmerism was the topic of conversation, he threw into the mesmeric sleep a young lady who had always refused to allow him to examine her cerebral development. He took this opportunity of examining it with his hands, and to his astonishment, as he touched over the organs of Self-Esteem, Combativeness, Wit, &c., the respective faculties went into action." Let us assume, then, having no certain information to guide us, that Self-Esteem, the organ first named, was the organ first examined, how easy to suppose that the freedom Dr Collyer was taking, excited in the young lady feelings which, if she had had the power of speech, she would have expressed by some such phrase as, "How dare you take such a liberty with me, Sir?" accompanied by the natural language of Self-Esteem! In the present case, the gestures being developed, without the words explanatory of their cause, the idea may have flashed across the brain of Dr Collyer, that they were the consequence of the particular locality touched; and, the idea once originated in this manner, the subsequent phenomena may have developed themselves because expected by the operator. Let Combativeness, in place of Self-Esteem, be assumed to have been the first organ touched, and we may surmise a sound box in the ear (intended by the patient as a chastisement for the Doctor's impertinence) to have been on this occasion the stimulus to his suggestive faculties; or if we assume Wit, how common is it with many persons to laugh, whenever anything unusual, or out of the common track, is done to them! Suppose, however, that instead of offering this explanation, I attribute the whole affair to a freak of imagination on the part of the patient, who will venture to set limits to the extent of this power in a susceptible female, and under such circumstances? Be it remembered also, that Dr Collyer, who must necessarily be more intimately acquainted with the exact circumstances which took place than any other person, so far from deeming them conclusive of the truth of Phreno-Mesmerism, has long since deliberately avowed his disbelief in the reality of the science; and if he has since altered this avowal into a statement that his mind is in a state of doubt, it has not been from any reconsideration of the phenomena attending his own discovery, but from fresh facts communicated to him by others.

From the experiments of Dr Collyer, let us now turn to the circumstances attending Mr Atkinson's first experience in Phreno-Mesmerism; because, although not the first disco-

verer, yet, as one who obtained certain results prior to having heard of the phenomena elicited by others, his experiments possess for our argument the same interest and value as those of the former gentleman. A striking peculiarity, then, well worthy of attentive notice, characterized the first phreno-mesmeric phenomena obtained by Mr Atkinson, when compared with the results observed by others; the feelings, instead of being excited in the patient by the touch of the operator, became active spontaneously, and had their localities indicated by the patient's own finger moving over, and resting upon, their seats. But can we not find some clue to the peculiarity manifested by his patient compared with other patients, in some peculiar ideas entertained by him, when compared with other operators? "For some years," says he, "I had been labouring to collect facts to enable me to disprove Mr Lockhart's assertion, that we are never aware of the action of any particular portion of the brain, during the manifestation of any special faculty. This assertion I have been able to disprove by curious cases of inward consciousness—by local pains and sensations following the excitement of particular feelings—by the action of the head following the excited part, and the hand pressing upon the organ. The facts which I gathered upon these points are very interesting and important, but time will not allow me to enter upon them on this occasion. I was induced to follow out this inquiry from a peculiarity in my own constitution, that in particular states of ill health I am conscious of the local action of different parts of the brain; my hand involuntarily touches the excited part, and pain is often felt there, which draws my attention to observe the phenomena. I mention this circumstance now to shew how my mind was prepared to seize at once on any similar effects which I might observe in the mesmeric trance, and also from the conviction, that in *Mesmerism the patient is greatly influenced by the peculiar condition of the mesmeriser, even where there is no particular or local sympathy whatever.*"—(*Medical Times*, No. 202, p. 294.) Comment on this curious coincidence would be superfluous; and it happens, most unfortunately for the credit of Phreno-Mesmerism, that the science is built up of facts of an equally suspicious character.

Let Mr Lowe, for instance, turn his attention for a moment to the commencement of his own phreno-mesmeric experience. At a lecture where Mr Lowe was present, Mr Spencer Hall touched the organ of Colour in one of his patients, who suddenly exclaimed, "It's black, all black;" but on the operator very slightly moving his finger, he said, "No,

it's blue ;" and on the tip of the finger being again slightly moved, and the operator saying interrogatively, "Oh ! it's blue, is it ?" he replied with a smile, "No ; who ever heard talk of a blue rose ? It's red, to be sure." "So", says Mr Lowe, "with a highly accomplished lady, with whom I was successful in inducing mesmeric sleep and calling forth the cerebral manifestations, on touching the same organ, she exclaimed, 'What a beautiful rose ! oh, what a lovely red !'" Now, granting there to be a separate part of the organ of Colour for perceiving red, and supposing it excited in a patient, I ask Mr Lowe whether objects of a red colour are so extremely scarce, as to render it probable that both patients should pitch upon the same, if they derived no suggestion from the mind of the operator ? To me it really is most extraordinary, how such cases as the preceding can occur, and yet no suspicion as to their true cause be excited.

Let us now turn to the experiments of Mr Mansfield, who must be regarded as the discoverer of the science in this country, inasmuch as he was the first to make known the result of his observations. This gentleman, then, be it observed, excited the organs by *blowing* on them, and arrested their action by *touching* them with his finger ; thus stimulating them by the same means used by others to paralyse them,—and the converse. Assuredly, if additional proof is wanted how entirely the phenomena displayed are dependent upon the ideas and intention of the operator, and how little upon the external manipulations employed, most abundantly is it furnished by the experiments of Mr Mansfield.

Mr Lowe demurs to my proposition, that "cases in which both operators and spectators are non-phrenologists are rendered worthless as evidence, by the presence of any phrenologist during the experiment," more especially in those instances where the patient is only able to hear the voice of the operator, and where the touch of a spectator does not elicit the phreno-mesmeric manifestations. "What an anomaly have we here !" exclaims Mr Lowe. "Strange that the silent volition of a spectator, unconsciously exerted, and without contact, should accomplish that which the same volitions, *audibly expressed, and aided by contact*, were unable to produce." "One such case as the above," continues he, "where the patient is evidently *not* in mental relationship with any but the operator, and that operator a non-phrenologist, seems conclusive, as far as it goes, in establishing Phreno-Mesmerism." The anomaly, however, exists only in Mr Lowe's apprehension ; and so far is it from being *evident* that the patient had no community of perception with others besides

the operator, because only cognisant of the operator's voice, that the fact, if of any value at all, is favourable to an opposite conclusion,—since frequently (perhaps generally), those patients who manifest in the greatest perfection the higher phenomena of Mesmerism, are those whose *external senses* are the most completely isolated, and sealed up to any channel of communication but through the operator. That the phenomena, in such a case as described, take place through the volition of a spectator unconsciously exerted, is certainly no doctrine of mine. If required to give an explanation, I should say that on the head being touched or pointed at, the patient, perceiving clearly that something is expected to occur, and failing to find what in the mind of the operator, seeks* for and obtains the information elsewhere. Though, however, not referring these results to volition *in the usual acceptation of the term*, yet I certainly do not believe they would occur in a case where the operator was a disbeliever in Phrenology, and would be much vexed at their manifestation.

Let us now proceed to examine, in detail, the different cases cited by Mr Lowe in favour of the reality of his science.

"First," says Mr Lowe, "I would instance such cases as those mentioned by Dr Elliotson, in which, if a stranger unacquainted with Phrenology points, and he (Dr E.) *does not know where he is pointing, the effect is produced.*"

The case of Dr Elliotson, referred to by Mr Lowe, deserves our particular attention, having proved a great stumbling-block to many who have, and still do, regard it as an *experi-*

* 'Seeks for' is perhaps, in many cases, as incorrect a description of what takes place on such occasions, as if we were to speak of seeking for notes of music, which, conveyed by aerial vibrations, come unbidden, and arrest our attention. To make clear my meaning, I must observe, that I hold it as certain that there must be a medium through which communication takes place in the mesmeric state, and entertain no doubt but that the laws which regulate its mode of action are as definite and unvarying as those which hold the planets in their orbits, and (except relatively to our weak senses) in every respect as deserving of being considered a branch of physics. It may, then, be considered probable, that emotions may vary in their power of exciting the attention of patients in the mesmeric trance, according to their intensity. We cannot, it is true, speak of their startling loudness, or their dazzling brightness, or their icy coldness, arresting attention; but, bringing analogy to our aid in a field so completely removed from the sphere of our direct perceptions, we may imagine emotions travelling (so to speak) in various octaves of intensity, and that thus the vivid emotions of a spectator may communicate to the mesmeric medium such a rapidity of vibration (or other peculiarity of action upon which intensity may depend) as for a moment to withdraw the mind of the patient from that attention to the operator, which is unquestionably the general characteristic of the mesmeric state.

mentum crucis ; and, fortunately for the sake of our argument, the Doctor has recently favoured us with a pretty full account of the features it presented. In treating of the phenomena of Traction, which Dr Elliotson refers to "volition, though compelled volition,—an irresistible desire to obey what was conceived to be an order," he claims for this patient the possession "of occult senses,—senses which in her waking state she had not;" and, moreover, informs us that when the eyes were closed, so that vision was unquestionably impossible, he has "laid a handkerchief, four times doubled, over her hands as they lay close together in her lap, and drawn up either at pleasure ; there being thus no possibility of either sight, or of hints from currents of air, or any impression upon any one of the five senses ;" and that, "however blindfolded, she could readily distinguish even the proximity of any other person's hand." And, in alluding to the power possessed by strangers of exciting the phenomena of Traction, the Doctor observes, "It was not the will of the stranger that irresistibly effected her obedience, but a knowledge, by some occult external sense, of what he was attempting. For, while I was not attending, strangers often drew her, who did not believe they should be able, and hoped the effect would not come ; and when I have intended to make longitudinal tractive passes along the outside of her arms upwards, to extend them, I have sometimes, from inattention, made them, in her and others, rather over the inside, and thus gave the idea of bending the arm ; and it has bent instead of extending according to my intention."—(*Zoist*, No. VI., pp. 203-12-13-15.)

It is not a little singular, however, that the moment the Doctor enters upon the subject of Phreno-Mesmerism, all memory of the "occult senses" he had just before claimed for his patient fades from his brain, and so totally does his recollection of them become obliterated, that he actually proceeds to found his argument in favour of Phreno-Mesmerism upon the impossibility of his patient's being apprised of the manipulations employed, because not within the usual sphere of cognisance of the five senses. "I do not see," observes the Doctor, "how there can be any suggestion in pointing the finger ; how it can be felt. It is of the same temperature as the patient's head, which head is covered by hair ; and on pointing it to any part of the neck, the most truthful patient can never tell whether you are pointing or not : and if you warm anything, so that it shall be undistinguishable from the finger by temperature, of the same size and shape, and point it, no effect ensues."

A satisfactory anti-phreno-mesmeric explanation of Dr

Elliotson's case is easily furnished. We have no occasion to resort to any improbable suppositions, but simply to take for our guide the Doctor's own narrative, and apply to the phreno-mesmeric phenomena the same exposition which he has applied to those of Traction. Surely, if the patient possessed "occult senses," capable of informing her which hand the Doctor designed to attract upwards through a handkerchief four times doubled,—which enabled her *readily to distinguish even the proximity of another person's hand*,—and, lastly, which apprised her that the Doctor (*contrary to his belief*) was making tractive passes over the inside, and not over the outside, of her arm, she could have had no difficulty in discovering which of the four* organs, Adhesiveness, Self-Esteem, Benevolence, and Destructiveness, a stranger was pointing at. In fact, what surprises me is, that any one conversant with the other phenomena she displayed, should ever have supposed the case furnished decisive evidence in favour of the phreno-mesmeric theory. Had the excitement of the organs been caused on the *first occasion* by a stranger ignorant of Phrenology pointing at them, without the Doctor knowing where he was pointing, the aspect of the case would have been different,—but *after* he has played upon these four organs scores, perhaps hundreds of times, and associations have been formed by the patient, the fact of their excitement by a stranger really amounts to nothing.

Mr Lowe next favours us with a case of his own. "I recently," says he, "tried an experiment with a highly intellectual lady, thus:—As soon as mesmerised, I turned my back upon her, and (having requested her father, who was the only spectator, to watch the manifestations, if any) extended my finger backwards, and touched the head at random. The experiment was twice repeated, with the most perfect success; for, though it was impossible for me even to guess the part of the head that was touched, and therefore volition was out of the question, the manifestations were as distinct and characteristic as though I had operated in the usual manner. In justice to Mr Prideaux, I must admit, that the spectator, on this occasion, was a phrenologist; but from an unfortunate defect of vision, he could not observe the precise point of the cranium that was touched, but merely watched the manifestations." The defect in vision was certainly unfortunate in more senses than one, since it led to an arrangement of the experiment which cannot be deemed satisfactory; for how can a person capable of watching the

* Only these four organs have ever been excited in this patient.

manifestations, be incapable of observing the part of the head touched? But I will not enlarge on this point; for, since Mr Lowe does not state that the lady was unacquainted with the position of the organs, and that she had not had them previously operated upon—both points essential to be known—it would be useless to examine the case farther. Such loosely conducted and carelessly described experiments can never be conclusive in establishing any fact, but the incaution of those who place reliance on them.

2dly, "What," asks Mr Lowe, "becomes of the power of the *will*, when an operator, desiring to elicit the manifestation of one organ, puts his finger by mistake upon another, and calls forth the action of the latter?" I shall not trouble myself to inquire "what becomes of the power of the *will*," but proceed at once to my task of shewing that such cases prove nothing on behalf of Phreno-Mesmerism. Three explanations occur to me: *First*, The patients may be conversant with the localities and functions of the organs. *Secondly*, They may have had the same organ operated upon before, and formed a correct association as to its seat. *Thirdly*, In cases where the operator is but imperfectly acquainted with the subject, and feels much hesitation as to the seat of the organs, the patient may not improbably borrow an idea from some better-skilled phrenologist, who may be closely watching the proceedings with a mind unshaken by any doubt as to the correctness of his knowledge of the subject.

3dly, "What," says Mr Lowe, "becomes of the exclusive theory of the will when patients give manifestations of the organs, on their heads coming in contact with adjacent inanimate objects?" Here, as before, I shall content myself with shewing the insufficiency of the cases detailed, to establish Phreno-Mesmerism. Mr Lowe alludes particularly to the experiments of Mr Hamilton of Liverpool, who "suspended weights over the head of a patient, and by this means elicited manifestations of the organs on the coronal surface, correspondent to the relative positions of the head and weights." "Mr Prideaux," observes Mr Lowe, "may object, that the presence of phrenologists renders these experiments worthless, as evidence in favour of a theory different from his own; but they were performed first privately by Mr H., when he was by no means familiar with Phrenology; and the chances, therefore, are, that he could not anticipate correctly *what* manifestation was to occur." We have already been treated with an account of some experiments performed in the presence of a gentleman almost, but *not quite*, blind; and now we are favoured with some per-

formed by another almost, but *not quite*, ignorant. I do not wish to be hypercritical, but I cannot understand how such evidence can be considered satisfactory. I entirely deny that Mr Lowe is justified in saying, "*The chances, therefore, are*, that he could *not* anticipate correctly what manifestation was to occur." Mr H. had already seen Mr Spencer Hall excite the organs; and if he possessed even but a very slight acquaintance with Phrenology, "*the chances are*" that he knew the situation of organs so notorious as Benevolence and Veneration: besides, it is highly improbable that he proceeded to institute experiments on so limited a region of the head, without putting himself in a condition to judge of the results. The following is Mr Hamilton's own account of the experiment in the *Phreno-Magnet*. "I suspended a brass eight-ounce weight by a silk thread, from the cross arm of a wooden stand, over the organ of Veneration. The upward motion of the head which is observed in that manifestation, brought Benevolence under the weight. The head continued to move backwards and forwards, and sentences were pronounced, beginning with 'O God!' 'Poor creatures!' according as Veneration or Benevolence was under the weight." I find here no mention of any ignorance of Phrenology, but I find a fact mentioned, corroborative of the view I take of such cases, viz., that the actions of the patients are the mere realization of the ideas of the operator. It is stated, that, upon the suspension of the weight over the organ of Veneration, "*the upward motion of the head which is observed in that manifestation*, brought Benevolence under the weight." Now, we know very well that the action of Veneration bows the head forward; but Mr H., being but superficially acquainted with Phrenology, did not know it, but thought otherwise, and hence the result.

4thly, "Many operators have elicited novel, and, to them, at first startling and unexpected manifestations."...."My friend, Mr Leighton, of Liverpool," says Mr Lowe, "was some time since trying to excite, in a young lady, the activity of Alimentiveness; when, to his astonishment, instead of evincing the usual desire for food, &c., the patient was seized with a paroxysm of horror, and in agony exclaimed that a dreadful monster was haunting her. He repeated the experiment with the same result; and on noticing more narrowly the spot which he had touched, found that the finger was not on Alimentiveness, but was just *below* and *before* the spot assigned to that organ."

"Many similar instances might be adduced," continues Mr Lowe, "but this one may suffice to shew the non-neces-

sity of volition, and to answer Mr Prideaux's objection, that if Phreno-Mesmerism were true, the earliest experimenters would occasionally, whilst operating on the supposed locality of one organ, with a view to elicit its function, have been surprised by the manifestation of some new faculty, of the existence of which they previously entertained no idea." I must remark, in reply, that the evidence against Phreno-Mesmerism afforded by the unquestionable fact that, generally (nine times out of ten, perhaps ninety-nine out of a hundred), precisely in proportion to the orthodoxy of the operator's opinions has been the orthodoxy of the results he has obtained, and *vice-versâ*, cannot be done away with by a few subsequent cases, in which the imagination of the patient, or some undetected source of suggestion, gives birth to results unexpected by the operator.

With reference to the particular case quoted by Mr Lowe, I will observe that, having the pleasure of being acquainted with Mr Leighton, I know him to be an accomplished phrenologist, and fully aware that there is supposed to be an "organ of love of life" seated at the base of the brain. The position of the organ of Alimentiveness not being considered to be quite so accurately determined as that of some others, it does not appear to me improbable that he may have had some little misgiving as to his accuracy, and the possibility of his acting on "Love of Life" may have occurred to him. Another explanation may be given : The young lady, perceiving that some very unladylike exhibition of voracity was expected to ensue on the excitement of the organ, may have had her Love of Approbation so shocked at the idea, as to have caused the appearance of alarm perceived by Mr Leighton ; and the imagination, as often happens in dreams, may subsequently have conjured up a phantom as the cause of the feeling. Possibly the young lady had been reading Sir Lytton Bulwer's novel of *Zanoni*, and had her imagination excited by his description of the "Terrible Dweller of the Threshold." Mr Lowe observes that "Dr Owens, of this town, though he had never seen anything of the kind before, elicited a similar manifestation on touching the same part of the head in another patient." We are not told whether Dr Owens had, or had not, heard of the result of Mr Leighton's experiments. I will, however, hazard the prediction that he had ; but if Mr Lowe can inform me to the contrary, then I will frankly confess that the circumstance forms the best argument in favour of Phreno-Mesmerism I have yet met with, being, as it will be, the only case I have ever heard of, in which two operators, ignorant of the experiments of each

other, stumbled by any chance upon the same results. I fear, however, there is little hope of this striking discovery of an "Organ of Nightmare" proving an exception to the general rule.

Mr Lowe's 5th, 6th, and 7th counts apply solely to the question of volition ; on which subject he evidently entertains a total misconception of my opinions.

Having now examined in detail, and, I trust, shewn the inconclusiveness of the cases adduced by Mr Lowe in favour of Phreno-Mesmerism, I shall make two general observations applicable to all such cases in common. First, Considering the ample evidence we have of the occult modes of perception possessed by mesmeric patients, it appears to me puerile to rely upon the superior conclusiveness of experiments, where only pointing is employed, to those in which the organs are touched ; and, secondly, I believe it is generally admitted that Mr Spencer Hall's experiments are as unexceptionably conducted as those of other phreno-mesmeric operators, yet we know that the results which ensue are most absurd. Now, no one, who rejects the results obtained by this gentleman, has any right to rely upon *any* results of phreno-mesmeric experiments conducted in a similar manner. Whether we are able to point out the source of error is a secondary question ; the circumstance, that a certain species of evidence supports results palpably false, totally invalidates such evidence for establishing any proposition whatever, quite irrespectively of the question of our ability to determine where the fallacy lies.

Some of the most powerful arguments against Phreno-Mesmerism—such as the discordance in the results obtained, by all operators who have been ignorant of the fancied discoveries of each other ; the fact that not a single addition has been made to our science by its employment ; and the circumstance that phreno-mesmeric phenomena never resulted from the contact of the operator's hand or inanimate bodies, till the operators became phrenologists—Mr Lowe has not even *attempted* to grapple with.

In none of the remarks I have made in the course of this paper, do I wish to be understood to express any opinion derogatory to the judgment of the first observers of phreno-mesmeric phenomena, for arriving at the conclusions they were led to form. They might then, perhaps, have decided in accordance with the balance of the evidence they were acquainted with, in attributing the phenomena to the application of a local stimulus, in preference to sympathy, volition, imagination, or any other cause. *Now*, in deciding on its

claims, and determining on which side probability preponderates, we have to take into account the immense mass of weighty, if not decisive, evidence since collected, which forbids this conclusion. A spectator, for the first time, of a mesmeric sitting, who should have the interior of his house, at many miles' distance (and which he knew no one present but himself had ever entered), minutely and accurately described to him, would doubtless feel the most profound conviction that the patient possessed the faculty of *vision at a distance*; but if he subsequently discovered that all the patient had stated with respect to what was occurring at the moment was incorrect, and that he was able to describe only such distant objects as some individual present was acquainted with, and further learnt that community of perception was one of the most frequently developed phenomena of Mesmerism, he would form a very different conclusion as to the cause of the previous phenomena he had witnessed. In the same way, a spectator of experiments on the excitation of the organs for the first time, would unhesitatingly attribute the results to the effects of stimulus applied to the seat of the organs. Farther experience, however, and the consideration of the opposing facts, should, I contend, induce him, in this latter case as in the former, to modify his opinions, and reject the explanation which at first sight appeared so clear, so obvious, and so unquestionable.

One difficulty which arguments in opposition to Phreno-Mesmerism have to contend against, is the circumstance that a much larger number of persons have a tendency to be satisfied with the *prima facie* evidence in its favour afforded by the excitement of the organs, than to subject such facts and their attendant circumstances to a rigorous analysis; and even if the latter be effected for them, the imposing character of those appeals to the senses on which their first opinion was founded, renders their impress on the memory much more durable, than that of reasons and arguments which, while listened to, perhaps seemed conclusive against it. Too frequently, also, a number of experiments of a similar kind, each inconclusive in itself, are, as a whole, allowed to make an undue impression. If, in an experiment of a certain character, the chances that the excitement of the organs resulted from a stimulus applied to their seat, or from some other cause, are supposed to be equal, and the value of the probability of each be represented by half, then ten thousand experiments of a similar character will make no change in the relative value of the probabilities. When, however, a slight prepossession in favour of Phreno-Mesmerism has ex-

isted, I have more than once been surprised to see that the effect of a reiteration of a number of experiments, each one of which the individual would have admitted to be characterised by a similar defect, has been to induce the most firm and unhesitating belief.

When the revelations of Phreno-Mesmerism shall become confirmed by numerous and repeated observations of the relation between size and manifestation, when we can speak with confidence of the additions it has made to our science, *then, but not before*, shall I be inclined to believe in its existence. In the mean time, although we cannot assert positively that a mesmeric patient never shall be met with, in whom, through some peculiar idiosyncrasy of constitution, the cerebral organs shall be susceptible of being excited by a sensation being produced on the scalp over their seat, yet I think we have ample evidence to shew, that if such idiosyncrasies exist at all, they must be exceedingly rare, since I see no reason for believing,—in fact, I do disbelieve,—that a true phreno-mesmeric phenomenon has ever yet occurred.

T. S. PRIDEAUX.

Portland Street, Southampton,
August 1844.

IV. *Contributions towards a more exact and positive knowledge of the organ named Language, and its Function.* By Mr RICHARD CULL. Continued from Vol. xvii., p. 153.

The inexact state of our knowledge of this organ and its function, was shewn in the preceding communication, and the means of arriving at more exact knowledge was also pointed out. In the present paper, attention will be drawn to some important facts in the Science of Words; and should the facts appear to be unconnected, and to have only a remote bearing on the subject under investigation, it is hoped that the judgment will be suspended until an application of such facts is made in the inquiry.

In treating of verbal language, it is necessary to premise that the distinctions and nomenclature of linguists and philologists will be adopted. The ordinary grammatical terms are assumed to be familiar. The grammars adopted as text-books state the rules of the several languages sufficiently well for common purposes, although they but loosely exhibit the powers of Cases, Tenses, &c. The laws of General Grammar do not fall within the scope of these text-books, and hence are omitted. In addition to such grammars, and in the absence of monographic treatises on the Science of

Verbal Language, the reader is respectfully referred to the following works as good sources whence to gather for himself some of the more important facts and principles of the science: viz. Tooke's *Diversions of Purley*, Professor Long's *Observations on the Greek and Latin Languages*, Allen's *Analysis of Latin Verbs*, Professor Latham on the *English Language*, Professor Lee's *Hebrew Grammar*, Sir Wm. Jones' *Persian Grammar*, Sacy's *Grammaire Arabique*, Professor Wilson's *Sanskrit Grammar*, Bosworth's, and also Raske's *Anglo-Saxon Grammars*, Grimm's *Deutsche Grammatik*, Bopp's *Vergleichender Grammatik*, and Hartung Ueber die *Casus*.

The words of the languages of civilized nations appear to have been originally monosyllabic. "All Anglo-Saxon words were originally, what are now termed, monosyllables; and consisted either, 1st, of a single vowel, as—*a*, *always*, *ever*: 2dly, of a diphthong, as—*æ*, *a law*: or, 3dly, of a vowel or diphthong, and one, two, or more consonants united; as—*ac*, an *oak*; *ælc*, *all*, *each*. For the sake of greater expedition in communicating the thoughts, and in the inattentive rapidity of pronunciation, two, three, or more words, expressing a complete thought, or a convenient part of one thought, were often uttered so closely together, as, at length, through the force of habit, to be considered as but one; consequently, those words which we call dissyllables, trisyllables, and polysyllables, are no other than two, three, or more entire words, or fragments of words, thus condensed into one. All words, therefore, of more than one syllable, are compounded of other words, which had a separate existence, either in the same language, or in some kindred tongue."* But further, Anglo-Saxon scholars know that many monosyllabic words are composed of the fragments of two or more words coalesced into one. Such words are also found in the kindred and in the derived dialects; thus, in the German language, the monosyllable "*zum*," is composed of the two monosyllabic words, "*zu dem*," coalesced into one word. "The Anglo-Saxons, like other Gothic nations, were remarkable for combining several short significant words to express any complex idea. Instead of adopting technical terms from other languages, it was their usual practice to translate them by a simple combination of the radical words, taken from their own nervous language."†

* Bosworth's *Compendious Anglo-Saxon Grammar*.

† Idem.

"In the Greek and the kindred languages, nearly every word is reducible to a monosyllabic form, by depriving it of those appendages which constitute the *particular* character of the word; thus, all words called nouns, adjectives, verbs, &c., whatever may be the particular form of case, tense, &c., are reducible, as a general rule, to the formula of a monosyllable, which, in perhaps the greatest number of instances, consists of a vowel flanked on each side by a consonant."*

Researches in so ancient a language as the Hebrew, and with so limited a literature as it possesses, must, of necessity, be less satisfactory than those in the Greek and Latin languages. The labours of Professor Lee, however, in this department cannot be too highly estimated. In the Hebrew, and its cognate languages, the words may be dissected down by severing those augments which modify the signification of the simple uninflected word.

The Arabic and Persic languages, like the Hebrew, admit of the dissection above named; and also the Sanskrit language, which admits it in an eminent degree.

The researches of philosophical etymologists have, for one object, to determine the laws under which these augmentations of words take place. Preliminary to this inquiry, however, it is necessary to know, *1stly*, what these augmentations really are; and, *2dly*, what they signify. The following statement and illustration of the subject to be investigated is too valuable to be omitted:—"As we proceed," says Professor Lee, in treating of the Augmented Hebrew Nouns, "it is my intention to offer some conjectures on the origin of the different augments; and should I not succeed in producing conviction, I shall, nevertheless, gain my point in another respect, namely, in impressing upon the learner's mind the different forms with which he will meet. Besides, by attempting to ascertain what these additional syllables really are, and what they mean, some light may be thrown on the manner in which language in general has been constructed; which appears to have grown up, in a great measure, out of necessity; so that words, which now exceed their primitive length, have been made so by the addition of others, qualifying or otherwise modifying their significations as circumstances have required. In process of time, many of these additional words have become attached to others, and have been so abbreviated as greatly to obscure their original forms and significations; *e.g.* the English word *attempting* seems

* Quarterly Journal of Education, vol. iii., p. 94.

to be compounded of *at* (*ad*, whatever that word was originally), *tempt*, and *ing*. The last component part is probably the same with the Latin *ens*, Greek *ἔν*, Sanscrit or Persian *ān*. Each part of this whole word might originally have stood singly; but the whole is now so compounded as to stand for one. In such words as *incomprehensibility*, *transubstantiation*, &c., I suppose we have not fewer than five or six primitive words compounded together into one.*

The dissection of words into their parts may be illustrated in the subjoined scheme. The examples are the Latin substantive *Infidelitatem*, and the verb *Conscripserant*.

Negative prefix. In	Root. fid	Crude form. e	Adjective formation. li	Substantive formation. tat	Connecting Vowel. e	Accusative Sign. m.
Preposition. Con	Root. scrip	Perfect sign. s	Flection syllable. er	Pluperfect sign. a	Plural sign. n	Person end- ing. t.

"Thus stands the whole matter," says Horne Tooke, in his invaluable chapter on Participles: "*Case, Gender, Number*, are no parts of the NOUN. But as these same circumstances frequently accompany the Noun, these circumstances are signified by other words expressive of these circumstances; and in some languages these words, by their perpetual use, have coalesced with the Noun; their separate signification has been lost sight of (except in their proper application); and these words have been considered as mere artificial terminations of the NOUN.

"So, *Mood, Tense, Number, Person*, are no parts of the VERB. But these same circumstances frequently accompanying the Verb, are then signified by other words expressive of these circumstances: and, again, in some languages, these latter words, by their perpetual recurrence, have coalesced with the Verb; their separate signification has been lost sight of (except in their proper application); and these words have been considered as mere artificial terminations of the VERB.

"The proper application of these coalesced words, or terminations, to *Nouns*, has been called *Declension*, and to *Verbs* has been called *Conjugation*. And perhaps this arrangement and these denominations may have greatly contributed to withdraw us from a proper consideration of this matter."†

The boasted great superiority of the Greek and Latin

* Lee's Hebrew Grammar, Article 154-3.

† Tooke's Diversions of Purley, part ii. chap. 7.

languages, compared with the English, in expressing by one word what in English requires several, may be calmly stated to be this : In the Greek and Latin languages is expressed by several words coalesced into one, what in English must be expressed by distinct uncoalesced words. This may be illustrated by the famous reply of Pilate to the Jews—“Ὁ γέγραφα γέγραφα—which is properly rendered in the authorized version, “What I have written, I have written.”

The word γέγραφα is thus dissected :—

Perfect Tense Augment.	Root.	Person-sign.
γε	γραφ	α

“In our own language, the manners and times are usually (but not always) signified by the words distinct from the *Verb*, which we call *auxiliaries*. In some other languages they are signified also by words, different, indeed, from the *Verb*, but which have coalesced with the *Verb*, and are now considered merely as terminations ; equally *auxiliary*, however, with our *uncoalescing* words, and used for the same purpose.”*

In the above illustration, it is evident that the augment and termination modify the signification of the root, just in the same manner and degree as the English pronoun and auxiliary “*I have*,” modify the signification of the verb “*written*.”

It will be observed that the Greek sentence consists of three words, while the English equivalent sentence consists of seven words ; but, as the word “*written*” is always pronounced in one syllable, it will be found that the Greek and English are each seven syllables to the ear, each syllable in both languages being either a separate word, or a fragment of a coalesced word, and each having its own signification.

In the Hebrew language, Professor Lee states that gender, number, &c., are no parts of the Noun, but are words expressive of sex, plurality, &c., abbreviated and coalesced with the Noun ; and that person, number, tense, &c., are also separate words abbreviated and coalesced with the Verb, to which they add their own separate signification.† Professor Lee recommends researches into the Latin and Greek languages, to discover what these separate words were, whose fragments are thus coalesced with the Nouns and Verbs. The researches of Dr Pott, of Professor Key, and of the lamented Dr Allen, have already determined to what words some of these fragments belong. “The letter *τ* is in Greek and Latin the sign of the third person. It is the element of the

* Tooke's *Diversions of Purley*, part ii. chap. 7.

† Lee's *Heb. Gram.*, Art. 139-7 ; 144-5 ; 171 ; 172 ; 173 ; and 174.

pronoun *eo* (*eo-ε*, *εη*, *eo-(δ)*), which occurs so constantly in Homer. In the passive in Greek, it appears regularly in both singular and plural: *ετυπτε-ε-ο*, *ετυπτον-ε-ο*. The final *ο* is the passive sign: *υ* is the plural sign: the second *ε* in *ετυπτερο* answers to the first *ο* in *ετυπτορο*—they may be called the mood vowels.

Augment.	Root.	Strengthening Letter.	Mood Vowel.	Person Ending.	Passive Sign.
ε	τυπ	τ	ε	Τ	ο

Augment.	Root.	Strengthening Letter.	Mood Vowel.	Plural Sign.	Person Ending.	Passive Sign.
ε	τυπ	τ	ο	υ	Τ	ο

The researches of modern philologists have added much positive and practical knowledge to the science of verbal language, by thus dissecting polysyllabic words, and exhibiting their structure, and the plans on which they are built.

In the English language, there are three modes of expressing the sex of the object named by the noun, viz. :—

1. By termination, as *Baron*, *Baroness*; in which the noun is said to have gender.

2. By a different word, as *Boy*, *Girl*; in which the noun is said not to have gender: and,

3. By placing a masculine or feminine pronoun, or other word expressing sex, before the noun, as *He-bear*, *She-bear*; in which case also the noun is said not to have gender.

It may be remarked, that although the word *Girl* has no gender, yet the sex is as perfectly expressed as it is by the gender termination of the word *Baroness*. And a similar remark applies also to the third mode of expressing the sex-distinctions of animals.

The Persian language has no gender. The sex-distinctions of some objects are expressed by a different word, as *asp*, a horse; *madiyan*, a mare; while those of others are expressed by adding the words *nar*, male, or *madah*, female, to the noun, as *shera nar*, a lion; *shera madah*, a lioness. The Latin language has gender. The sex-distinctions of most objects are expressed by a gender termination, as *dominus*, a lord, *domina*, a lady. And neither of these languages is superior to the other in recognising and expressing the sex-distinctions of objects.

The circumstances of mode, time, person, &c., are expressed in some languages by terminations, which are fragments of words coalesced with the verb, and which, in grammar,

* Allen's Analysis of Latin Verbs, p. 231.

are technically termed tenses. In other languages, those circumstances are expressed by distinct uncoalesced words, called auxiliaries and pronouns, which are grouped with the verbs in a phrase, and which, in the ordinary grammars, are, for the convenience of students, classified as and termed tenses, but which philologists do not consider to be tenses.

In the English language there are only two tenses. In the Greek there are six:—*τύπτω* (*Tuptō*), I strike; *έτυπτον* (*etupton*), I struck; *τύψω* (*tupsō*), I shall strike; *έτυψα*, (*etupsa*), I struck; *έτυψα* (*etupha*), I have struck; *έτετυπην* (*etetuphein*), I had struck. The English phrases annexed to the preceding Greek tenses are exactly equivalent to them, since they express the same circumstances in connection with the verb "to strike," as the Greek expresses. In comparing the tenses and phrases together, scholars mostly prefer the tense, not because it expresses the idea of time, &c., with greater exactness—for in that respect they are equal—but because, with an equal precision, it is expressed with greater elegance in the Greek tense than in the English phrase.

In the French language there are five tenses. The German, like the English, has but two. Subjoined are the German and English equivalents to the first person singular of the five French tenses.

FRENCH.	GERMAN.	ENGLISH.
Je frappe,	Ich schlage,	I strike.
Je frappeis,	Ich schlug,	I struck.
Je frappai,	Ich schlug,	I struck.
Je frapperai,	Ich werde schlagen.	I shall strike.
Je frapperois.	Ich würde schlagen,	I could strike.

It is important to separate the ideas from the verbal forms by which they are expressed in any given language. The German ideas of time are as acute, exact, and complete, as the French, although the Germans possess but two tenses; for the same ideas are expressed by their phrases as by the French tenses. Dr Spurzheim, therefore, is in error when he cites the Greeks and French, as having superior notions of time to the Germans and English, because they have a greater number of tenses. "The languages of different nations," says he, "present fine examples of modifications produced by the mutual influence of the faculties. I even admit as a principle, that the spirit of its language proclaims the predominating faculties of a nation. I have spoken of a faculty which learns and knows the signs invented by the superior intellectual faculties, to express the feelings and ideas. It is evident, therefore, that a nation with many feelings or ideas must have many signs, and that the number of any one kind of these indicates the energy of the faculty they

represent. Thus, the Greek and French languages have a greater number of tenses than the German and English.* If the English language possessed no other means of expressing time than by its two tenses, then would its signs for expressing time be inferior in number to the Greek and the French, and there would be valid ground to infer a superiority in their notions of time. But the phrase, *I have struck*, is an exact equivalent to the Greek tense *έρουρα*; and it is a current expression in our literature, and in our common speech. And all the phrases which are set down in the Greek grammars as equivalent to the Greek tenses are familiar expressions in the language. The time-signs of the Greek language, then, consist of tenses; those of the English consist of tenses, and also of those phrases which are arranged and termed tenses in most elementary grammars.

In the present paper I have drawn attention to the views of the leading philologists of Europe, on the mode of abbreviating speech by constructing polysyllabic words with the fragments of other words. Attention has been drawn also to different modes of verbally expressing certain complex ideas, and which have been illustrated rather fully, in order to correct an error into which Dr Spurzheim had fallen, in not including the uncoalesced words of a phrase with the true tenses, as time-signs.

II. CASES AND FACTS.

- I. *Case of Vision-seeing, accompanied with Headach and a sense of Pressure in the region of the Perceptive Organs, and rendered more vivid by application of the Finger over those organs.* By WILLIAM GREGORY, M.D., F.R.S.E., Professor of Chemistry in the University of Edinburgh.

A lady, recovering from a severe attack of general febrile cold or influenza, accompanied with sore throat and with intense headach, mentioned to me, that when in bed with her eyes shut, she saw objects of the most vivid colours, and frequently of very distinct forms. I resolved to examine the phenomena, but first ascertained that the patient felt convalescent, but very weak; that the sore throat was not removed; and that there was still headach to some extent, with sensations of pressure in certain parts of the head. She stated, fur-

* Spurzheim's Philosophical Principles of Phrenology. sec. vi. chap. i. p. 159 of the third edition.

ther, that she had all her life been subject to headaches, and had very often noticed the visions when in indifferent health. She has a general acquaintance with Phrenology, but is not able to point out the situation of the smaller organs in the anterior lobe correctly.

It occurred to me that possibly the excited condition of certain organs might depend on a state analogous to the mesmeric state, and that it might be modified by the contact of the finger. I accordingly, after the patient had closed her eyes, asked her what she saw. Her answer was—"Beautiful colours." She could only describe these, however, as floating before her; indicating the excitement of Colour without Form. I then applied the fingers over the organs of Colour, without making any remark. At the first contact she said, "All the colours are gone;" but instantly added, "They have come back;—ah! they are now far more bright and beautiful—how exquisite!" Here I placed another finger on the organ of Number, when she at once exclaimed, "I see the whole room full of things of the most brilliant rainbow colours; there must be a million of them!" I now touched Order also, when she said, "I see a multitude of the most beautiful patterns of all colours, like the figures in the kaleidoscope." The fingers were now removed, and after an interval of a second or two she declared "that all the colours had faded into a sombre grey," and in no long time the patterns also vanished.

I now touched Form, but could observe no distinct separate effect, the patient repeating that she saw nothing. The same took place with Individuality. But when I again touched Number and Order, she at once described multitudes of specified objects arranged with regularity; for instance, stones arranged on shelves, glass ornaments on shelves also; and when I added Colour, the stones and glass acquired the most heavenly tints, set off by gilding,—and after a very short period numerous fruits of all colours, exquisitely arranged, presented themselves; a nursery garden, with numerous beds of brilliant flowers, appeared; and finally, a crowd of ladies in gaudy bonnets and dresses were described.

I subsequently touched Number again, when a multitude of feathers was seen: Colour again dressed them in splendid hues, and Order caused them instantly to arrange themselves into baskets of symmetrical form. Weight, when first touched, caused no change; but on a subsequent trial, the objects instantly began tumbling down, one after the other, in endless succession. Size, being accidentally touched, caused the exclamation of "Oh! what an immense cathedral with beautiful coloured windows! I cannot see to the end of it." Then came

interminable lines of the most gaudy fishes of all colours ; gowns without end, marked with beautiful patterns ; and other visions. When Locality was touched, either separately or along with other organs, no effect was perceptible ; and the same negative result was obtained when Eventuality, Time, and Tune, were tried.

I repeated the experiments above described several times, and always with the same success ; and the removal of the finger was always instantly followed by the disappearance of the visions then present, although others might afterwards arise without the finger when the eyes were shut, as was originally observed by the patient. The result of my observations on this occasion was, that the excitability was confined to the inferior range of the organs in the anterior lobe ; and that of these, Colour, Size, Order, and Number, were very highly excitable ; Form, Individuality, and Weight, much less so ; while Language was not examined.

I was much struck with the fact, that the patient, before any experiments were made, when asked to point out those parts where a sense of pressure or fulness was felt, placed my finger first on a space including Colour and Order, and after that on Individuality.

I must not forget to mention that the variety of objects described was enormous, a few only being mentioned above ; but that on no occasion was the same vision mentioned twice, that is, at two distinct touchings, during these experiments.

The headach and fulness indicate increased circulation as the cause of these phenomena in this case ; but the action of my finger, in exciting or exalting the visions, forms a link of connexion with the mesmero-phrenological phenomena which is worthy of careful investigation.

Visions, such as occurred spontaneously to this patient, the eyes being shut, are far from rare ; and I have no doubt that in many cases they will be found as much under the influence of the finger as was the case here. I heard, before this case occurred, of a gentleman, much engaged in intellectual pursuits, who is almost nightly in the habit of seeing, after he retires to bed, visions of various objects, which he describes minutely to his wife, and which are often a source of amusement from their unexpected nature. One, I recollect, described by him, was a large turkey-cock, strutting about in a very ludicrous manner. It is quite possible that his visions may be modified by the contact of the finger.

Finally, I have simply described the facts as I observed them, or rather as they were described to me. I can answer for the entire trustworthiness of the patient ; and besides, I

not only carefully abstained from leading questions, or indeed any questions, but frequently led her to suppose I was touching a different organ from that which was really tried at the moment. I also combined two, three, and four together, in different order, and suddenly, but the results were always equally distinct in the case of the excitable organs; while the non-excitability of the others was quite unexpected by me, and, in fact, disappointed me a good deal.

About a week after the above observations were made, I had an opportunity of confirming them again, and it further occurred to me to try the following experiment:—I made the lady apply her own finger to some of the organs, and found that they were excited exactly as when I myself touched them, at least in the case of several organs. Colour, for example, was strongly excited in this way. Without entering into any theory of this fact, it must be admitted to be an interesting one, and worthy of more careful investigation. When the lady herself excited the organs, she did not know which she was touching.

30th January 1844.

II.—On the Character and Skull of Sir Thomas Browne.

By ROBERT COX.

Sir Thomas Browne was a studious and learned physician of Norwich, where he died in October 1682, at the age of seventy-seven. His works are well known to the lovers of old English literature, more especially his *Religio Medici*, *Hydriotaphia, or Urn-Burial*, and *Treatise on Vulgar Errors*. Of his dispositions and opinions, our means of judging consist of the Montaigne-like communications made by himself in the *Religio Medici*, and a character drawn by his friend and panegyrist Mr Whitefoot, nearly the whole of which is quoted by Dr Samuel Johnson in his Life of Sir Thomas. From these it would appear, that in none of the three great departments of his mind—animal, moral, and intellectual—was there any general deficiency of endowment; and that, when the excitability of youth had passed away, his lower feelings were so much under the control of the moral, religious, and intellectual powers, that their suggestions were firmly and habitually resisted. “He had,” says Mr Whitefoot, “no despotical power over his affections and passions (that was a privilege of original perfection, forfeited by the neglect of the use of it), but as large a political power over them as any Stoic or man

of his time, whereof he gave so great experiment, that he hath very rarely been known to have been overcome with any of them. The strongest that were found in him, both of the irascible and concupiscible, were under the control of his reason." On this subject he himself says: "To do no injury, nor take none, was a principle which, to my former years and impatient affections, seemed to contain enough of morality; but my more settled years and Christian constitution have fallen upon severer resolutions. I can hold there is no such thing as injury; that if there be, there is no such injury as revenge, and no such revenge as the contempt of an injury; that to hate another is to malign himself; that the truest way to love another is to despise ourselves. I were unjust unto mine own conscience if I should say I am at variance with anything like myself. I find there are many pieces in this one fabric of man; this frame is raised upon a mass of antipathies. I am one, methinks, but as the world, wherein, notwithstanding, there are a swarm of distinct essences, and in them another world of contrarieties; we carry private and domestic enemies within, public and more hostile enemies without. The devil, that did but buffet Saint Paul, plays, methinks, at sharp with me. Let me be nothing, if within the compass of myself I do not find the battle of Lepanto; passion against reason, reason against faith, faith against the devil, and my conscience against all. There is another man within me that is angry with me, rebukes, commands, and dastards me. I have no conscience of marble, to resist the hammer of more heavy offences; nor yet too soft and waxen, as to take the impression of each single peccadillo or scape of infirmity." And in another place he says: "*Ipsa sui pretium virtus sibi*, that virtue is her own reward, is but a cold principle, and not able to maintain our variable resolutions in a constant and settled way of goodness. I have practised that honest artifice of Seneca, and, in my retired and solitary imaginations, to detain me from the foulness of vice, have fancied to myself the presence of my dear and worthiest friends, before whom I would lose my head rather than be vicious; yet herein I found that there was nought but moral honesty, and this was not to be virtuous for His sake who must reward us at the last. I have tried if I could reach that great resolution of his, to be honest, without a thought of heaven or hell; and indeed I found, upon a natural inclination, and inbred loyalty unto virtue, that I could serve her without a livery; yet not in that resolved and venerable way, but that the frailty of my nature, upon easy temptation, might be induced to forget her. The life, therefore, and spirit of all our actions, is the resurrection, and a stable

apprehension that our ashes shall enjoy the fruit of our pious endeavours ; without this, all religion is a fallacy, and those impieties of Lucian, Euripides, and Julian, are no blasphemies, but subtle verities, and atheists have been the only philosophers." He was actuated, he says, far more by the desire of heaven than by the fear of hell ; thinking that those "mercenaries that crouch unto God, in fear of hell, though they term themselves the servants, are, indeed, but the slaves, of the Almighty."

The medical practice of Sir Thomas Browne was lucrative ; but, says Mr Whitefoot, "his liberality and indulgence to his children, especially in their travels, two of his sons in divers countries, and two of his daughters in France, spent him not a little. He was liberal in his house entertainments, and in his charity : he left a comfortable but no great estate, both to his lady and children, gained by his own industry, having spent the greatest part of his patrimony in his travels." Speaking of charity, Sir Thomas says in the *Religio Medici*,—"I hold not so narrow a conceit of this virtue, as to conceive that to give alms is only to be charitable, or think a piece of liberality can comprehend the total of charity. Divinity hath wisely divided the acts thereof into many branches, and hath taught us in this narrow way many paths unto goodness : as many ways as we may do good, so many ways we may be charitable ; there are infirmities, not only of body but of soul and fortunes, which do require the merciful hand of our abilities. I cannot condemn a man for ignorance, but behold him with as much pity as I do Lazarus. It is no greater charity to clothe his body, than apparel the nakedness of his soul. It is an honourable object to see the reasons of other men wear our liveries, and their borrowed understandings do homage to the bounty of ours. It is the cheapest way of beneficence, and, like the natural charity of the sun, illuminates another without obscuring itself. To be reserved and caitiff in this part of goodness is the sordidest piece of covetousness, and more contemptible than pecuniary avarice. To this (as calling myself a scholar) I am obliged by the duty of my condition : I make not, therefore, my head a grave, but a treasure of knowledge ; I intend no monopoly, but a community in learning ; I study not for my own sake only, but for theirs that study not for themselves. I envy no man that knows more than myself, but pity them that know less. I instruct no man as an exercise of my knowledge, or with an intent rather to nourish and keep it alive in mine own head, than beget and propagate it in his ; and in the midst of all my endeavours, there is but one thought that dejects me, that my acquired parts must perish with my-

self, nor can be legacied among my honoured friends. I cannot fall out," he adds, "or condemn a man for an error, or conceive why a difference in opinion should divide an affection; for controversies, disputes, and argumentations, both in philosophy and in divinity, if they meet with discreet and peaceable natures, do not infringe the laws of charity."

He thanks God, that "amongst those millions of vices I do inherit and hold from Adam, I have escaped one, and that a mortal enemy to charity, the first and father sin, not only of man, but of the devil—pride;" but in the fact of his publishing a book descriptive of his own opinions, feelings, whims, and fancies, we have abundant evidence that his self-complacency was of a very comfortable kind.

Like Swift, he had none of that peculiar affection towards kindred which the majority of mankind display. "I confess," says he, "I do not observe that order that the schools ordain our affections, to love our parents, wives, children, and then our friends; for, excepting the injunctions of religion, I do not find in myself such a necessary and indissoluble sympathy to all those of my blood. I hope I do not break the Fifth Commandment, if I conceive I may love my friend before the nearest of my blood, even those to whom I owe the principles of life. I never yet cast a true affection on a woman, but I have loved my friend as I do virtue, my soul, my God." Mr J. A. St John, editor of the last edition (1838) of the *Religio Medici*, confesses himself unable to understand "this Doric modification of passion." "In my humble judgment," says he, "the man most capable of love will be most capable of friendship." Phrenology clears up the difficulty, by shewing two elements of love, Amativeness and Adhesiveness, of which only the latter is an element of friendship. That the former was weak in Sir Thomas Browne appears from his well-known whimsical declaration, that he "could be content that we might procreate like trees," without the necessity of what he characterizes as "the foolishhest act a wise man commits in all his life,"—"an odd and unworthy piece of folly." He adds, however, "I speak not in prejudice, nor am averse from that sweet sex, but naturally amorous of all that is beautiful."

In mature life the temperament of Sir Thomas Browne appears to have been of a sober, enduring, and unexcitable kind. According to Mr Whitefoot, "he was never seen to be transported with mirth, or dejected with sadness; always cheerful, but rarely merry at any sensible rate; seldom heard to break a jest, and when he did, he would be apt to blush at the levity of it; his gravity was natural without affectation. They that knew no more of him than by the briskness of his writ-

ings, found themselves deceived in their expectation when they came in his company, noting the gravity and sobriety of his aspect and conversation ; so free from loquacity, or much talkativeness, that he was something difficult to be engaged in any discourse, though when he was so, it was always singular, and never trite or vulgar. Parsimonious in nothing but his time, whereof he made as much improvement, with as little loss as any man in it, when he had any to spare from his drudging practice, he was scarce patient of any diversion from his study, so impatient of sloth and idleness, that he would say, he could not do nothing.

“ Sir Thomas understood most of the European languages, viz., all that are in Hutter’s Bible, which he made use of. The Latin and Greek he understood critically.” The oriental languages he thought not worth the time and pains of studying them, yet was not wholly ignorant of Hebrew. He was skilled in Astronomy, “ and of the earth he had such a minute and exact geographical knowledge, as if he had been by Divine Providence ordained surveyor-general of the whole terrestrial orb, and its products, minerals, plants, and animals. He was so curious a botanist, that besides the specifical distinctions, he made nice and elaborate observations, equally useful and entertaining.

“ His memory, though not so eminent as that of Seneca, or Scaliger, was capacious and tenacious, inasmuch as he remembered all that was remarkable in any book that he had read ; and not only knew all persons again that he had ever seen, at any distance of time, but remembered the circumstances of their bodies, and their particular discourses and speeches.

“ Such was his sagacity and knowledge of all history, ancient and modern, and his observations thereupon so singular, that it hath been said by them that knew him best, that if his profession and place of abode would have suited his ability, he would have made an extraordinary man for the privy council, not much inferior to the famous Padre Paulo, the late oracle of the Venetian State.”

He was fond of travelling, and in his youth visited most parts of Ireland, besides France, Holland, and Italy.

His religious feelings were strong, and he may be described as superstitious, even in a superstitious age. “ Methinks,” says he, “ there be not impossibilities enough in religion for an active faith ; the deepest mysteries ours contains have not only been illustrated, but maintained by syllogism, and the rule of reason. I love to lose myself in a mystery, to pursue my reason to an *O altitudo* ! It is my solitary recreation to pose my apprehension with those involved enigmas and riddles of

the Trinity, with incarnation and resurrection. I can answer all the objections of Satan and my rebellious reason, with that odd resolution I learned of Tertullian, *Certum est quia impossibile est*. I desire to exercise my faith in the difficultest point ; for to credit ordinary and visible objects, is not faith, but persuasion." He believed that there is an intermediate class of spirits between men and angels ; " that those apparitions and ghosts of departed persons are not the wandering souls of men, but the unquiet walks of devils, prompting and suggesting us unto mischief, blood, and villany, instilling and stealing into our hearts ; that the blessed spirits are not at rest in their graves, but wander solicitous of the affairs of the world ; but, that those phantasms appear often, and do frequent cemeteries, charnel-houses, and churches, it is because these are the dormitories of the dead, where the devil, like an insolent champion, beholds with pride the spoils and trophies of his victory over Adam" (*Religio Medici*). Sir Thomas's Calvinistic views of theology made him " much apprehend the ends of those honest worthies and philosophers which died before the incarnation of Christ," and who, consequently, did not, and could not, believe in the Saviour. " It is hard," says he, " to place those souls in hell whose worthy lives do teach us virtue on earth ; methinks, amongst those many subdivisions of hell, there might have been one limbo left for these. What a strange vision will it be to see their poetical fictions converted into verities, and their imagined and fancied furies into real devils ! How strange to them will sound the history of Adam, when they shall suffer for him they never heard of ! when they who derive their genealogy from the gods, shall know they are the unhappy issue of sinful man !" These reflections being unpalatable to his rational and moral faculties, he calls in faith to remove the difficulty :—" It is an insolent part of reason to controvert the works of God, or question the justice of his proceedings. Could humility teach others, as it hath instructed me, to contemplate the infinite and incomprehensible distance betwixt the Creator and the creature, or did we seriously perpend that one simile of St Paul, ' Shall the vessel say to the potter, Why hast thou made me thus ? ' it would prevent these arrogant disputes of reason, nor would we argue the definitive sentence of God, either to heaven or hell."

It is no disparagement to Sir Thomas Browne to say that he believed in witchcraft, at a time when many of the best and most learned men concurred in thinking such belief securely founded both on Scripture and experience. At a trial of two accused persons before Sir Matthew Hale, at Bury St Edmunds, in 1664, resulting in their condemnation and

execution, Sir Thomas expressed the opinion, "that the fits were natural, but heightened by the devil's co-operating with the malice of the witches, at whose instance he did the villainies;" adding, that "in Denmark, there had lately been a great discovery of witches, who used the very same way of afflicting persons by conveying pins into them." In one of his works he gravely remarks, "that to those who would attempt to teach animals the art of speech, the dogs and cats that usually speak unto witches may afford some encouragement."

Some of his works display considerable sagacity and power of ingenious argument; but there is little depth, and in the main he discusses subjects of mere curiosity, and often whimsical or absurd. To quote an accurate remark of Dr Aikin—"Of all his writings it may be said, that where the reader does not meet with useful instruction, he will not fail of information and amusement; for the author, though frequently trifling, fanciful, and paradoxical, is never dull."* He thinks it worth while to consider such questions as—Whether Judas was hanged, or only broke his neck; whether Eve was fashioned from Adam's right or left side; whether the world was created in summer, winter, or spring; and whether Adam was furnished with a navel.

The style of his *Religio Medici* is "bold and poetical, and adorned with picturesque imagery, but frequently pedantic, rugged, and obscure."† Like all his writings, it abounds with uncommon words and phrases, intelligible only to readers skilled in the classical tongues.

The qualities of Wonder, Ideality, Secretiveness, and Comparison, seem to me to distinguish his productions.

There are extant three portraits of Sir Thomas Browne. The best engraved likeness of him is that prefixed by Mr Wilkin to his excellent edition of Browne's Works (London, 1836): it was engraved, he states, "by Mr Edwards from White's, in the folio of 1686, compared with a copy taken, by Dr Bandinell's kind permission, from the original picture in the schools at Oxford,—a decidedly better picture than that presented by Dr Howman to the vestry of St Peter's, Norwich, and, I believe, than that which is in the College of Physicians." (*Works*, vol. i. p. 15.)

The phrenological indications of the engraved portrait are these. The superciliary ridge is prominent, especially in the situation of Individuality; and there seems to be an excellent

* Aikin's Biographical Dictionary, vol. ii. p. 327.

† Chambers's Cyclopædia of English Literature, vol. i. p. 298, where the finest passages in Sir Thomas Browne's works are extracted. See also an article in the Edinburgh Review, vol. lxiv. p. 1.

development also of Form, Language, Eventuality, Comparison, Benevolence, and Veneration. The lower region of the forehead is better developed than the upper, which, however, is by no means extremely defective. The top and sides of the head are represented as covered with long and flowing hair, so that the cranial configuration at Ideality and Wonder is not very apparent. As to the organs at the base of the brain, the portrait gives no information whatever.

According to Mr Whitefoot, Sir Thomas Browne's "complexion and hair was answerable to his name; his stature was moderate, and habit of body neither fat nor lean." His temperament, therefore, was probably sanguine-bilious.

Although engravings, and even original pictures, are a species of evidence on which perfect reliance cannot be placed, it seems very likely that the indications just mentioned are in the main such as the head of Sir Thomas Browne presented in the vigour of his days.

In the *Athenæum* of 12th September 1840, p. 117, the following letter to the editor of that journal made its appearance:—

" NORWICH, September 5, 1840.

" SIR,—I forward you an account of the recent accidental discovery of Sir Thomas Browne's remains, in the Church of St Peter Mancroft, in this city. Some workmen were employed in digging a grave within the area before the altar, when their pickaxe struck on a hard substance, which turned out to be a coffin-plate, which was unluckily split by the force of the blow. It was a small antique brass shield, bearing the following inscription:—

" Amplissimus Vir Dns. Thomas Browne, Miles, Medicinæ Dr., Annos natus 77, Denatus 22 Die Mensis Octobris Anno Dni. 1682, hoc loculo indormiens, corporis Spagyrici pulvere plumbum in aurum convertet.

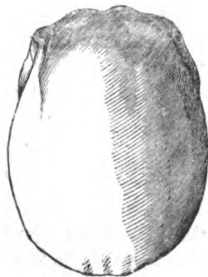
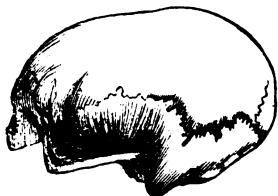
" On a closer inspection, the coffin quaintly described above as having been 'transmuted into gold' by the potent 'dust' of the mighty 'alchymist,' was found to have been *literally* converted into a *carbonate of lead*, which crumbled at the touch, disclosing the bones of its illustrious tenant. There is no truth whatever in the report, pretty widely circulated, that 'the features remained entire.' The flesh had returned 'to earth as it was,' but the *hair* of the beard was in good preservation. A portion of this was compared with its representation in an oil painting of the knight, suspended in the vestry; and the colour of the original corresponded exactly with that of the copy. Now we have the testimony of Sir Thomas

Browne himself, that ‘teeth, bones, and *hair* give the most lasting defiance to corruption.’ The skull was sound, and still contained a mass of brain. Unhappily for the phrenologists, the forehead was narrow, low, and receding; whereas that part appropriated to the animal propensities was unusually large. It may be right, perhaps, to add, that the venerable bones thus fortuitously exposed were seen by few, and were reverently handled. After having slept undisturbed for more than a century and a half, it was reasonable to presume that they had become incorporated with the soil; no sort of blame, therefore, could reasonably attach to the selection of their resting-place for another occupant. I have thus given the true particulars of a circumstance which should not have been made public, had not erroneous reports gone abroad respecting it. I am, &c.

THOMAS D. EATON.”

A few impressions were taken from the plate on the coffin by Mr Robert Fitch of Norwich, who presented one of them to the London Antiquarian Society. In his letter to the secretary of that Society, of which I possess a copy in MS., he gives the same account with Mr Eaton of the manner of the discovery, and the state in which the remains were found. “The forehead,” he adds, “was remarkably low and depressed; the head unusually long; the back part exhibiting an uncommon appearance of depth and capaciousness. The brain was considerable in quantity, quite unctuous; the hair profuse and perfect, of a fine auburn colour.”

Soon after observing Mr Eaton’s letter in the *Athenæum*, I wrote to a gentleman in Norwich, requesting information on various points, particularly whether a cast of the skull had been taken, and, if so, whether a duplicate could be obtained. In reply, he gave me grounds for hoping to receive a cast by and by; and, after a long interval, having succeeded in procuring it, he had the kindness to transmit it to Edinburgh. He has favoured me, also, with one of the impressions from the plate upon the coffin. Subjoined are two sketches of the cast.



Dimensions of the Cast.

	Inches.		Inches.
Greatest circumference, . . .	22	From Ear to Firmness, . . .	5
From Occipital Spine to Individuality, over vertex, . . .	12½	... Destructiveness to Destructiveness, . . .	5½
... Ear to Ear, over vertex, . . .	11½	... Secretiveness to Secretiveness, . . .	5½
... Philoprogenitiveness to Individuality, . . .	7½	... Cautiousness to Cautiousness, . . .	5½
... Concentrativeness to Comparison, . . .	6½	... Ideality to Ideality, . . .	4
... Ear to Philoprogenitiveness, . . .	4½	... Constructiveness to Constructiveness, . . .	4½
... ... Individuality, . . .	4½	... Mastoid process to Mastoid process, . . .	4½
... ... Benevolence, . . .	4½		

On a careful examination of this cast, I find it neither so ill-shaped as has been represented, nor yet exactly such as might have been expected from the portrait, and from the recorded character of Sir Thomas Browne. But in this I see nothing "unhappy for the phrenologists," as Mr Eaton so confidently expresses himself. The extensive changes which the skull undergoes in old age, in consequence of the decrease of the brain, particularly in the frontal region, are so well known, and so generally recognised by anatomists, that cases of aged people have long been justly excluded from the catalogue of trustworthy phrenological data: phrenologists, as was formerly stated on a similar occasion in this Journal, hold it to be "impossible to predicate from the inspection of the skulls of very aged persons what their talents or dispositions were at the time of vigorous maturity; and, consequently, although useful as *illustrations*, such cases are never to be considered admissible as *proofs* either for or against Phrenology."—(Vol. ix. p. 468.) If indeed, it could be shewn that the skull of Sir Thomas Browne, as it now exists, gives an accurate representation of the form of the brain at the meridian of life, Mr Eaton might, with some reason, pronounce the case "unhappy for the phrenologists." In fact, however, we are entitled to consider it merely as a confirmation of the previously ascertained fact, that important changes of the cranial form occur in advanced age. In these circumstances, a very few additional remarks on the head of Sir Thomas Browne will suffice. That the organs of his propensities became larger in old age does not seem probable; and from such meagre details as we possess concerning his character (the most significant of which are quoted in the present article), it appears that the propensities generally were of considerable strength. "To take no injury,"

was a maxim congenial to the "impatient affections" of his youth; and subsequently he found "the battle of Lepanto" within the compass of himself—a liability of the frailty of his nature, when unpropped by religious considerations, "upon easy temptation to be induced to forget virtue." The great size of Philoprogenitiveness accords with the indulgence to his children noted by Mr Whitefoot; of Combativeness, with his love of paradox, and the traits above mentioned; of Secretiveness, with his reserve, silence, and suppression of the outward manifestations of emotion: there are parts of his works where it is difficult to say whether he writes as a humourist or gives expression to serious opinions. The moderate size of Amativeness, and the much superior development of Adhesiveness, are in harmony with what has already been noted. The organs of Love of Approbation, Self-Esteem, Concentrativeness, and Cautiousness, particularly the first, appear from the cast to have been largely developed. Benevolence and Firmness are considerable; and between them, in the site of Veneration, a very slight depression is observed. The skull, on the whole, is decidedly above the ordinary size.

III. Cases of Imperfect Perception of Colours.

In the *Review Medicale Française et Etrangère, par J. B. Cayot*, November 1843, are given a variety of cases of imperfect perception of colours, similar to those already familiar to the readers of this Journal. The first mentioned is reported by Dr Boys de Loury. "M. H. was destined in his youth to follow his father's trade, that of a dyer of cloth. He practised it for several years, but found himself at length compelled to relinquish it, because he could never succeed in suitably matching the colours. Dr Boys tried several experiments with him. He placed before him a piece of cloth of the most different colours, and in the most different arrangements. A beautiful and exceedingly lively orange-colour appeared to him to be simply yellow; the same was the case with an apple-green; he saw only a slight modification or gradation between them. Apricot-colour also appeared to him yellow; the elder, blue; the deepest violet always grey; nevertheless, he distinguished the gradations of them most successfully. Ponceau, madder, and vermillion appeared to

him all alike—violet; he confounded it with blue: the red rose appeared to him a dirty white. A beautiful brown was to him black, &c. Dr Szokalski has published the case of a man who perceived no colour whatever. Every object presented itself to his mind as copper-plate or bas-relief. The sky, the trees, &c., all appeared to him of a grey tint. He could form correct ideas of objects only by feeling." The defect is regarded as hereditary, and the author ascribes it to atrophy of the optic nerve, although not distinguishable by the senses.

It is extraordinary, that at this time of day, medical men should report such cases without taking the trouble to add, whether the organ of Colouring was large or small. They apparently are so perfectly ignorant of its situation and appearances when large and small, that they cannot trust themselves with making any remark on the subject. A conjecture concerning a state of the optic nerve, which they admit to be imperceptible to the senses, is a poor substitute for a positive fact. If they could report that the part of the brain designated by Gall as the organ of Colouring, was amply developed, and in sound condition, in the man who had no perception of colours, how triumphantly would they dispose of that organ!

In the celebrated criticism of Mr Combe's *System of Phrenology*, which appeared in the *Edinburgh Review* for October 1826, Lord Jeffrey stated the following objection to the organ of Colouring: "So far is it from being true that we do not perceive colour by the eye, that in reality it is colour, and *colour alone*, that is the primary object of its perceptions. What we see, indeed, is only light; but light is always coloured (if we include white as a colour), and the different colours are in reality but so many kinds of light." "Colour, in short, is the only quality of light by which we are ever made aware of its existence; and to say that we do not see colour by the eye, is in reality to say that *we do not see at all*; for the strict and ultimate fact is, that we never see any thing else." Mr Combe replied, that "mere difference of *shade* is sufficient to enable us to perceive forms by the eye, as is proved by the arts of black-chalk drawing and copper-plate printing; and that for the perception of *shades*, a much lower degree of the combined action of the eye and organ of Colouring will suffice than for acutely discriminating the relations of colours." (*Phrenological Journal*, vol. iv. p. 48.) At that time no case of a total incapacity to perceive colours was on record, so that the argument was hypothetical on

both sides ; but the instance now cited confirms Mr Combe's ideas. Dr Szokalski, who reports it, uses the very illustration of the man's actual mode of perception, which Mr C. employed eighteen years ago in answering the reviewer's objections. "Every object," says he, "presented itself to his mind as a copper-plate or bas-relief. The sky, the trees, &c. all appeared to him of a grey tint." We regret that this person's case was not more fully investigated, in regard to the extent of his perception of forms by the eye.

In vol. vii. p. 148, we quoted the case of Dr Dalton of Manchester, in whom the power of distinguishing certain colours was very defective. Blue, purple, pink, and crimson, all appeared to him to be blues, and with respect to various other colours his perceptions were equally anomalous. To account for the defect, he conjectured that one of the humours of his eyes must have been a transparent but *coloured* medium, so constituted as to absorb *red* and *green* rays principally, and to transmit blue and other colours more perfectly. "I suppose," says he, "it must be the vitreous humour, otherwise, I apprehend, it might be discovered by inspection, which has not been done."—(*Memoirs of the Literary and Philosophical Society of Manchester*, 1798, vol. v. part. i. p. 28, &c.) We learn from the *Manchester Guardian* of 3d August 1844, that Dr Dalton's eyes were examined by his medical attendant Mr Ransome, on Saturday 27th July, the day of his death, "with reference to this visual peculiarity ; but," adds the journalist, "we have not heard the result, so as to state it with precision ; and it will, doubtless, ere long, be laid before the scientific world."*

* The following particulars are mentioned in the same paper :—"On Saturday afternoon, Mr Politi, having obtained permission, took a plaster cast of the head and face of the deceased philosopher. On the same afternoon, an examination of the brain was made by Mr J. A. Ransome, surgeon, the deceased's friend and medical attendant, in the presence of Dr Lyon, Mr W. J. Wilson, surgeon, and Mr Tomlinson, house-surgeon at the Manchester Royal Infirmary. This examination was a careful and very minute one ; and it was found that the left hemisphere of the brain was rather softer than the right, and that there was a very small *cyst* (or bag containing morbid matter), not larger than a pea, on the left side of the brain, in the medullary part, near the outer edge, and just above the top of the ear. This cyst was filled with a brownish pulpy mass, rather thinner in consistency than the surrounding brain. In other respects, the brain appeared very healthy, and presented no unusual appearances. It was not thought necessary to open the body. Immediately after this examination, Mr William Bally, who arrived too late to take the cast of the head and face, took one of the interior of the cranium and also of the cyst, of which he is to make a model in wax." The *Manchester Courier* of 17th August contains the following announce-

IV. *The Cerebral Development of Dr Justus Liebig ; with Remarks*, by WILLIAM GREGORY, M.D., F.R.S.E., Professor of Chemistry in the University of Edinburgh.

During Professor Liebig's late visit to Edinburgh, I was fortunately enabled to have his cerebral development examined, under very favourable circumstances. As he was staying in my house, I had opportunities of knowing that his mind was quite unprejudiced, and prepared to receive information on the subject of Phrenology candidly and with interest, shewing an obvious desire to be made acquainted with facts. I therefore introduced him to Mr Combe, Dr A. Combe, Mr Simpson, Mr R. Cox, and other phrenologists ; and as it was arranged that he should meet Dr A. Combe at Mr Combe's house, I requested him to allow his head to be manipulated there, to which he immediately agreed, and the examination was accordingly made by Mr Combe, Dr A. Combe, Mr R. Cox, and myself, with the utmost care. Knowing his dispositions so well as I have long done, my judgment of the development might have been suspected ; but I was much pleased to find, that the other gentlemen agreed both among themselves and with me, in regard to the actual development ; and the names of these three phrenologists will, I am sure, be considered a sufficient guarantee for the accuracy of the following details. It may even be considered by many, that a development so guaranteed is preferable to a cast of the head, inasmuch as no cast is free from a certain amount of error in size, whether general or partial. I have made these observations because it appears to me, that the cerebral development of one who has stamped its peculiar character on the Chemistry of the last twenty years, and whose

ment :—" Mr Bally, of King Street, has just completed an exquisite little bust of the lamented philosopher, reduced from a cast taken after death. In height it is about eight inches, and, being a *fac-simile* of the one taken after death, is one of the best likenesses we have yet seen. Mr Bally has also taken a cast of the philosopher's brain, which possesses a very remarkable feature in its organization. It is well known that Dalton was unable to distinguish colours, and we find that on both sides of the frontal sinus the phrenological organ answering to the faculty is singularly defective, there being a high ridge, and corresponding indent in the brain, precisely where the organ is placed by phrenologists." We saw in Mr Bally's possession, last August, a cast of the superorbital surface on which the anterior lobes had rested, and certainly there did appear to have been a high ridge indenting the brain at the situation of each organ of Colouring. Mr Bally stated that no peculiarity had been found in the humours of the eye ; but we look forward with some interest to the publication of a scientific report of the *post-mortem* appearances.

writings are exercising a daily increasing influence, not only among scientific men, but among all who are interested in the useful arts, forms a most interesting study for the phrenologist, as on the character of this development will depend whether the impression made by Liebig in science is to be a permanent or only a passing one.

		Inches.
Greatest circumference of head,		22 7/8
From ear to ear vertically over the top of the head,		14 1/2
..... Occipital spine to Individuality,		7 1/2
..... Concentrativeness to Comparison,		6 1/2
..... Ear to Occipital spine,		4 1/2
..... Individuality,		5 1/2
..... Firmness,		6 1/2
..... Destructiveness to Destructiveness,		6 1/2
..... Secretiveness to Secretiveness,		6 1/2
..... Cautiousness to Cautiousness,		6 1/2
..... Ideality to Ideality,		5 1/2
..... Constructiveness to Constructiveness,		6
Size of anterior lobe very large, the lower region predominating.		
Portion of brain above Cautiousness, large.		
Do. above Causality, large.		
Temperament, bilious-nervous, with a little sanguine.		
1. Amativeness, rather large, 16	17. Hope, rather large,	16
2. Philoprogenitiveness, full or rather large, 15	18. Wonder, large,	18
3. Concentrativeness, rather large, or large, 17	19. Ideality, large,	18
4. Adhesiveness, large, 18	20. Wit, or Mirthfulness, full,	14
5. Combativeness, full, 14	21. Imitation, rather large,	16
6. Destructiveness, very large, 20	22. Individuality, large,	18
Alimentiveness, large, 18	23. Form, very large,	20
7. Secretiveness, large, 18	24. Size, large,	18
8. Acquisitiveness, rather large, 16	25. Weight, large,	18
9. Constructiveness, rather large, or large, 17	26. Colouring, rather large,	16
10. Self-Esteem, rather large, 16	27. Locality, large,	18
11. Love of Approbation, large, 18	28. Number, full,	14
12. Cautiousness, large, 18	29. Order, rather large,	16
13. Benevolence, large, 18	30. Eventuality, large,	18
14. Veneration, very large, 20	31. Time, large,	18
15. Firmness, very large, 20	32. Tune, full,	14
16. Conscientiousness, large, 18	33. Language, full,	14
	34. Comparison, large,	18
	35. Causality, large,	18

The foregoing must strike every phrenologist as a remarkable development. In the first place, although, from its fine proportions, the head does not at first strike the eye as unusually large, it is in reality one of great size, as proved by the measurements; farther, as the measurements also shew, the great mass of brain lies in the anterior lobe and coronal region. Secondly, The temperament is of the first quality, both for activity and endurance; and, taking these things together, we may safely say, that it would be difficult

to find a more favourable combination of moral and intellectual power, or one better calculated to take and preserve a place in the highest rank among men of science. The size of the anterior lobe is unusually great. It is long, high, and broad; the latter dimension especially is remarkable, as is shewn by the measurements, from Ideality to Ideality, from Constructiveness to Constructiveness, and others.

In the German head, the upper (reflective) region of the anterior lobe often predominates over the lower (perceptive) region; and the result is obvious in the speculative and reflective character of German writings in general, and their frequent deficiency in practical observation. In this head, although the reflecting region is well developed, the *predominance* lies in the knowing organs; and there can be little doubt, that to this combination may be traced the success of Liebig as a chemist. His acuteness of observation is unrivalled, and his chemical papers are models of accurate description of facts and phenomena, as well as of profound and logical reasoning from these.

It will be seen, that all the perceptive organs are largely developed, only Number, Tune, and Language, being in some degree inferior to the rest. Of the singular acuteness of observation arising from the great Individuality, Form, Size, Weight, Colour, and Order, I may mention the following illustration. A good many years ago, Liebig had occasion to make some observations on, and an analysis of, a crystallized substance which occurs in the allantoic fluid of the foetal calf, and which had been called Allantoic acid. Long afterwards, when engaged, along with Wöhler, in the celebrated researches on Uric acid, he obtained crystals, which, being analyzed, gave a result very different from that of the analysis of Allantoic acid, and which were therefore supposed not to be at all connected with that substance, although containing the same elements in different proportions. But on looking at these latter crystals, which were very small, Liebig observed, in their form, lustre, and general characters, so great a resemblance to the crystals of Allantoic acid, which he had not seen for several years, that, in spite of the discordant results of analysis, he expressed his conviction that they were the same substance. This opinion he was soon after enabled to test, by finding a few grains of the former Allantoic acid; which, when thoroughly purified, and analyzed by the more accurate method now introduced, finally gave the very same analytical results, and which was thus proved to be the same compound. In the hands of ninety-nine men out of a hundred, the similarity in minute points of external character would have been overlooked, or, if ob-

served, would not have been attended to in the face of the two first analyses: whereas the accuracy of Liebig's observations made him feel confident, even against his own analyses.

With reference to the reflective faculties, the whole works of Liebig are full of striking examples of their power and activity. It is a leading characteristic of his mind, never to look on an experiment, save as the means of answering some question put by the reflecting faculties; and never to make experiments blindfold, for the chance of stumbling on some new phenomenon. The latter practice is common enough, when the reflecting faculties are deficient; but it is their vigour in Liebig which, by giving to all his researches a definite object, has rendered them so fruitful in important practical results. As fine examples of the action of this invaluable mental quality, may be mentioned his splendid researches on the urine, and those which he has caused to be made on the bile, which alone are sufficient to stamp him as the founder of true physiological chemistry.

It is also to the great activity of the reflective and perceptive faculties combined, that we must attribute the fertility of his mind in original discovery. Subjects which, in other hands, have appeared exhausted and uninteresting, have often, in his, turned out to be rich mines of discovery. He is himself so little aware of the real source of his original sagacity, that he has often repeated, in his writings, as well as verbally, that any man who chooses may make discoveries in chemistry; that we have only to stoop down and pick up discoveries from the ground. But before we can follow his example in this respect, we must have an organization similar to his; and this is an advantage enjoyed by few.

I might expatiate much longer on Liebig's intellectual character, which I have long carefully studied; but space fails, and I rather proceed to some other points. I shall only add here, that, as a lecturer, Liebig is unsurpassed. Without the least pretensions to eloquence; nay, with no great fluency of speech, he has the inestimable gift, as a teacher, of never using a superfluous word, and of adducing illustrations at once beautiful and apposite in the highest degree.

Looking to the moral faculties, we find a very fine organization. Benevolence, Veneration, and Conscientiousness, are all very largely developed; and perhaps one of his most striking features is the pure and intense love of truth,—a quality which, even in a scientific point of view, is invaluable, shining brightly forth in the minute accuracy of his researches, and giving double value to all his statements. In his dealings with others, he is equally distinguished for kind-

ness, liberality, generosity, and justice, and is a friend on whom the most perfect reliance may be placed. Perhaps the high tone of moral feeling which pervades his conduct, is best seen in his relations to his pupils. Instead of shewing jealousy of them, and concealing his ideas from them, as many not undistinguished chemists have done, he systematically furnishes those who are qualified for the task with interesting subjects of research, guides and assists them with his advice, and thus is enabled to point, every year, to a new series of important practical papers, produced by his pupils. By this liberal treatment, he has the advantage also of retaining the warmest attachment on the part of his pupils, whose views in life he is always ready to promote, when they have shewn themselves men of capacity.

The very large Veneration gives a peculiarly strong feeling or instinct of natural religion; and Liebig's works on Agricultural and Animal Chemistry are full of the most striking illustrations of the Divine power and wisdom, as manifested in the laws of animal and vegetable life. These works, indeed, furnish an inexhaustible store of new illustration of the adaptation of means to ends, and of the infinite simplicity of the laws established by the all-wise Creator.

It will be observed, that the development of Self-Esteem is considerably below that of the moral feelings above mentioned, as well as below that of Love of Approbation; which is in beautiful harmony with the unselfish liberality I have above described, and which I have personally experienced on many occasions. The great development of Firmness equally agrees with his uncommon perseverance in the pursuit of his researches. That his conclusions, on practical points, have rarely been altered, or required alteration, has arisen, no doubt, partly from the very prominent Cautiousness.

Coming now to the propensities, we find Destructiveness very large; and that this corresponds with the character, must be admitted by all who have ever read any of his critical writings, which are often fearfully severe, even although just. Combativeness is much less developed; and all who know Liebig personally, will allow that he is not a combative man. It is true, that, as a journalist, he is frequently engaged in controversies; but it is certain that he hates controversy, and often endures a great deal rather than engage in it. I have had many opportunities of knowing the truth of what I have just stated. Once engaged in a dispute, he is severe enough, but this arises from Destructiveness; and I may say, that he would never voluntarily enter on a controversial discussion.

The domestic group of faculties is well developed, and form the character of an excellent son, husband, father, and friend. Concentrativeness is also powerful; and it may be mentioned, in illustration of this, that once, when engaged in some interesting researches, he dropt some oil of vitriol on his hand, and did not notice the accident, which occurred in the morning, till he had finished his experiments towards evening. The instant he withdrew his mind from his studies, he felt a most severe pain, and, on looking, found his hand corroded to the bone, without his having noticed the pain during the whole time his mind was occupied.

Of the warmth and steadiness of his friendship, I could give many examples, but this one may suffice. At the death of Professor Geiger, his very intimate friend, Liebig, finding that the family of Geiger was but ill provided for, undertook to complete the chemical part of the fifth edition of Geiger's *Manual of Pharmacy*, which its author had just commenced before his death. In the execution of this gratuitous labour, he rewrote the whole work, and enormously increased it both in extent and in value. In this he was occupied almost exclusively for several years, and had the satisfaction of saving a valuable property for his friend's family, and even rendering it much more valuable.

It may, perhaps, be interesting to many to know, that, owing to his moderate organ of Language, Liebig was distinguished at school as booby,—the only talent then cultivated in German schools being verbal memory. On one occasion, being sneeringly asked by the master what he proposed to become, since he was so bad a scholar, and answering that he would be a chemist, the whole school burst into a laugh of derision. Not long ago, Liebig saw his old schoolmaster, who feelingly lamented his own former blindness. The only boy in the same school, who ever disputed with Liebig the station of booby, was one who never could learn his lesson by heart, but was continually composing music, and writing it down by stealth, in school. This same individual Liebig lately found at Vienna, distinguished as a composer, and conductor of the Imperial Opera House. I think his name is Reuling. It is to be hoped, that a more rational system of school instruction is now gaining ground. Can anything be more absurd or detestable, than a system which made Walter Scott and Justus Liebig boobies at school; and so effectually concealed their natural talents, that, for example, Liebig was often lectured before the whole school, on his being sure to cause misery and broken hearts to his parents, while he was all the time conscious, as the

above anecdote proves, of the possession of talents similar in kind to those he has since displayed, and while he felt entirely unable, from a natural defect, to perform the allotted tasks of verbal memory, even when trying his utmost? This defect of verbal memory has adhered to him ever since; and is now frequently a cause of great annoyance. I may add, that he suffers also considerable inconvenience from his deficient Number, which leads to frequent errors in the details of his numerical calculations.

I may seem to some to have spoken too highly of the subject of these remarks; but I am sure that two classes of persons will not think so, namely, those who know Liebig well, and have had opportunities of judging of his character; and those who are sufficiently acquainted with Phrenology to appreciate the full meaning and value of such a development as I have laid before them.

Finally, I beg to repeat my conviction, that it is of great interest to record the carefully observed development of a man occupying the position in science that Liebig does; and that the lapse of time will only serve to deepen and strengthen the impression which his intellect has produced on the science to which he has devoted his life.

III. NOTICES OF BOOKS.

I. *Zeitschrift für Phrenologie*, No. V. Heidleberg: Karl Groos, 1844.

The German Phrenological Journal, No. V., March 1844.
Edited by GUSTAV VON STRUVE and EDWARD HIRSCHFELD, M.D.

The first article in this Number of our German contemporary is on the Physiology of the Nervous System in relation to Phrenology, by Dr Hirschfeld. The author gives an able and interesting sketch of the most important facts concerning the nervous system, from the works of Burdach, Longet, Serres, Tiedemann, and other authorities. He traces the condition of the nerves from the embryo to the mature state; describes the advance of development of both brain and nerves from the lowest of the animated tribes up to man; and shews that an increase of motive, sensitive, or mental power, accompanies each increase of size in these parts in the different races.

The second article, entitled "Geheimerath Mittermaier and Phrenology," consists of a criticism by Mr Gustav Von

Struve, on Professor Mittermaier's opinions regarding criminal legislation, and especially the punishment of death. In his Letter to Mr George Combe (see *ante*, vol. xvi. p. 1), Professor Mittermaier had said that "a punishment is then only right and appropriate, when it operates favourably on the individual offender, and when it is calculated to promote his improvement, and bring forth in him a reformed character." Mr Von Struve accuses the Professor of inconsistency, in subsequently writing as follows :—"So long as a majority of the people continue to recognise in the punishment of death the only means of just retribution (*ausgleichungsmittel*) for certain of the heavier crimes, and at the same time the means of calming the public sentiment; and so long as those who are called on to give advice, and who know the people's opinions, represent the punishment of death as one which, in many instances, deters from crime, it is impossible to set these popular convictions at defiance."

"According to this doctrine," says Mr Von Struve, "a punishment, recognised by Professor Mittermaier himself as unjust and inappropriate, should be retained out of deference to the opinions of the people. In a purely democratic government, this principle would, unquestionably, be of weight, but not at all in a constitutional monarchy. In the latter, the majority of the voices of the whole people does not decide. What! shall we retain the punishment of death and brutalising prisons, out of respect to democratic principles, while so many other institutions and arrangements are denied to us *because they are* democratic? If we retain unjust and inappropriate punishments out of deference to democracy, on the one hand, and; on the other, out of regard to the monarchical principle, reject institutions that are peculiarly popular, we shall choose only the worst parts of both."—"According to the principle here maintained, we never could advance a step. The majority are always, at first, hostile to every improvement; they are capable of recognising its true character only by degrees. It is the duty of the higher classes to enlighten and elevate the masses of the people."

In No. VII. of the *Zoist* there is a sound and able article on the punishment of death, which we recommend to Mr Von Struve's attention: it is well worthy of being transferred into his own journal. "Year after year," says the author of the article, "rolls on, and each succeeding year adds fresh victims to our catalogue of executions. Judges and juries assemble at stated intervals, and pass through the usual monotonous routine, commencing their proceedings with prayer and thanksgiving, and terminating them by hang-

ing one or more of their brethren. Senators and moralists sanction the course pursued ; and the people still rush in thousands to witness the display of legalized destructiveness, with as much, if not more, avidity, than they formerly manifested to behold a bull-fight, or the struggles of the boxing-ring. In the middle of the nineteenth century, after the promulgation for 1844 years of a moral code which forbids the practice of retaliation, we perceive the recognised and paid expounders of this code sanctioning the existence of a law directly at variance with their own doctrines. Say what we will, it is the principle of revenge which prompts men to take the life of a criminal. It is doing that which they profess not to do,—returning evil for evil. ‘Let not the sun go down upon thy wrath :’ ‘Have mercy and not sacrifice :’ ‘Forgive one another.’ These precepts are uttered day after day by ten thousand priests throughout civilized England, and re-echoed by the millions who with their lip-service lisp what they are told, without for one moment considering that the moral precept is broken, and that at every execution for murder, a second murder is committed.”

Article III., likewise from the pen of Mr Von Struve, treats of “The Influence of Legislation on the Intellectual and Moral Condition of the People.” The author observes :—“The object of the legislation of every state is to place on a firm basis the opinions of the people on the subject of law and justice ; because only by means of the people and their ideas can the laws come into practical operation. The eternal principles of justice, embodied in the laws of human nature, should ever coincide with the ideas of justice taught by the legislature of a country—in other words, only such principles as correspond with the dictates of everlasting truth, should be invested with the authority of positive laws.”

“In Germany, a thousand laws stand side by side, each at variance with the others. What in one state of the Confederacy is right, in another is wrong. The cause which in one state would be unconditionally gained, would in another be unconditionally lost. Amidst this diversity of laws, uniformity in our notions of justice cannot be attained. Every individual who has reached to a perception of these inconsistencies must necessarily waver in his conceptions of what is right, and such wavering places him in a ticklish condition for venerating the laws. Nothing, after their inherent appropriateness, conduces so much to the due reverence of laws as their firm endurance and wide-spread authority. The Prussian Government, therefore, could not resort to any means more effectual for destroying the solidity and durabi-

lity of the laws, than the revival of the old provincial laws of her different states. The establishment of a legislative power for making laws for the whole of Germany, would do more to confer on it national unity than all that has been accomplished by the German Confederation (*Bundestag*) in twenty-seven years. If the Confederation had acted in the spirit of the whole German people, and introduced laws, binding on them all, on the subject of crimes and punishments, private rights, processes at law, commercial transactions, and exchanges, they would have done more to develop the resources of their country than all the political storms and revolutions of the other European nations have achieved for them." The author then selects several striking illustrations of laws which are dissimilar and inconsistent in the different states, the natural principles of which, nevertheless, are, in all the countries, the same. For example,—*Nature* imposes on parents, whether the ecclesiastical ceremony of marriage has been performed or not, the obligation of providing for their offspring. Nevertheless, the "code civil," in force throughout a considerable portion of Germany, in its 340th article, declares that, in case of illegitimate births, "all inquiry after the father is forbidden." "The Roman law," says Mr Von Struve, "already left the path of nature when it introduced a distinction between the legal rights of a legitimate and an illegitimate child; and the French code departed still more widely from it when it released the father from his natural duties towards his offspring. Nature does not allow her laws to be trampled under foot with impunity." The neglected child, if the mother, in her despair, be not led to murder it at its birth, may become the fountain of future immoralities and crimes. It may live to curse both father and mother who have ushered it into a degraded state of existence; while the state also, whose laws have abandoned it to neglect, may reap the bitter fruits, when it becomes a riotous drunkard, a dangerous criminal, or the parent of a wide-spreading, reckless, degraded, and illegitimate family.

Another example is drawn from the law relative to oaths. "The most unprincipled scoundrel, the most notorious thief, if he only had tact enough to avoid a conviction for perjury, or some gross crime, will be elevated by the intervention of an oath, into the most perfectly credible witness; into one whose testimony shall outweigh that of the most truthful, universally esteemed, and irreproachable individual, who has not fortified his evidence by swearing. . . . The inquirer who seeks instruction from nature and practical life, knows what an oath is, and what effect he has to expect from it.

It is a mere formality which does not restrain the liar from lying, and presents to the upright man no additional motive to speak the truth. Our courts have become so lax on the subject of oaths, that they quietly permit the most glaring perjury to be committed, without ordering any subsequent investigation, even when no man of common understanding can for a moment doubt, that the facts sworn to are utterly false. The consequence is, that the fear of earthly punishment for perjury has long ceased to operate on witnesses." The mode of administering the oath also, says Mr Von Struve, is so slovenly, that it does not awaken the conscience to the fear of retribution in a future life. Even in those cases in which the law provides that a spiritual teacher shall prepare the witness to swear, by instructing him in the nature and responsibility of an oath, the proceeding is in general an empty form. "The number of perjuries is enormously great, and is every year increasing; nevertheless no remedy is applied." Mr Von Struve recommends, that instead of merely saying to a witness, "An oath is sacred; perjury will be punished in this life by imprisonment, and still more severely in a future state," the court should endeavour to awaken the *feeling* of the sanctity of an oath, and also the *fear* of temporal punishment for perjury; the latter by sparing no pains to convict perjurers, and by punishing them certainly and severely when convicted.

In our opinion, oaths should be abolished altogether, and instant punishment inflicted for every prevarication committed in a court. A legal practitioner in the Supreme Court of Scotland informed us, that, during thirty years' practice, only one instance had fallen under his observation in which a man refused to *swear* to a statement which he had judicially made without an oath. It was the case of a debtor imprisoned by his creditors on suspicion of fraud; and who, on an application for aliment under "the Act of Grace," gave up, before the magistrate, a statement of his funds, and stated solemnly, that it contained every item of his property. When required to swear to its truth, he hesitated, and requested another day or two to examine his books, to make certain that he had not omitted any thing. Time was allowed to him, and he was again brought up at the distance of three days, when he assured the court and the creditors that his statement was all correct. Being again required to swear to it, he again hesitated, and said there was no necessity for his doing so, as it was perfectly correct. He was then remanded to prison for this refusal; and after learning that he could not obtain either aliment or his liberation without giving his oath, he sent for

the trustee for his creditors, and confessed that he had secreted L.250, which was deposited in a bank in the name of a friend. He added, that although he was convinced in his own conscience that it was quite just and honest in him, in the circumstances which he detailed, to keep that sum for his own use, yet he could not peril his immortal soul for preserve it, and therefore surrendered it. This individual was a religious man, in whom Veneration, Acquisitiveness, Secretiveness, and Cautiousness, were all largely developed, and Conscientiousness was small; and his case was the only instance in which the slightest hesitation had been known to occur, in swearing to falsehoods, however gross, which had been previously affirmed to be true. Phrenologically, the reasons for this result are obvious. When Conscientiousness and the intellectual organs are large, the individual is disposed to speak the truth from the love of truth, and a regard to justice; when Conscientiousness is small, these emotions are not experienced, and Veneration does not supply their place. The fear of future punishment in the foregoing instance operated beneficially; but this was a rare exception. When Conscientiousness is very deficient, the individual is not strongly impressed by the sinfulness of falsehood; he lays the flattering unction of repentance to his soul, and is not more apprehensive of the Divine than of the human tribunal.

Article IV. is "On the application of Phrenology to the Fine Arts," being a translation of a portion of letters from Mr Combe, which have already appeared in our Journal.

The next article is "On Religion and Worship," by Dr Gustaf Kombst, and was suggested by the paper on "Primitive Christianity, Protestantism, and Catholicism," which we noticed in our last Number. "The more minutely we inquire into the nature of man, the more shall we find that his modes of thinking, feeling, and acting, are the products of his natural mental organization, and of the circumstances which lead to their development. This proposition holds good equally in the case of individuals and of nations. Their highest mental development is only the matured fruit of their primitive mental endowments. This reference to the primitive mental qualities of mankind furnishes us, every where, with a natural principle by which to explain the diversities of religious views entertained by different nations, and the changes of these opinions among individual tribes. The Mongolian differs in formation from the Caucasian race: consequently, from contemplating the phenomena of nature, it must form different conceptions of

God and the external world, from those which will suggest themselves to the minds of the latter. Among the varieties of any one race, also, there are various modifications in the form of the brain or in the primitive mental faculties; in consequence of which, although the same fundamental views may prevail among them all, the most diverse modifications of them may take place in particular instances. We have here only to refer to the Hindoos, the Arabians, and Europeans, all of whom belong to the Caucasian race, and all of whom adore one God as the Creator and preserver of the world, and, nevertheless, entertain very different opinions of the nature of the Godhead, of his mode of governing the world, and so forth.

“The Jews regarded God as a king who was frequently angry, addicted to punishing, and, therefore, greatly to be feared; in precise conformity with the naturally predominating organs of Destructiveness, Secretiveness, and Cautiousness, in their own brains. Among the Greeks, in the formation of whose brains Benevolence, the Sense of the Beautiful, Form, Constructiveness, and Tune prevailed, together with an ample development of the organs of the reflecting faculties, we discover religious views in which there is a peculiar blending of matters spiritual with things belonging to the senses (*sinnlichen*). Among the Romans, in whom the knowing organs were more developed than the reflecting, but who, being of a kindred race, possessed some of the above-mentioned qualities of the Greeks,—the religious observances partook more of an external and formal character. At no period do they appear to have been so much imbued with reflection and imagination.

“Christianity, from the first, addressed itself to the highest faculties of man—it engaged the reflecting faculties and Ideality, much more than the various observing powers. Indeed Christianity may, so far, be named the spiritual religion. But here, again, the influence of the natural organization of the different nations which embraced Christianity, on their manner of conceiving it, and on the external forms of their worship, is very great. Christianity is, in an eminent degree, the religion of the most thinking and highest organized race of mankind, viz., the Caucasian; and among this race, again, it was that variety in which the reflecting organs are the largest in proportion to the other organs, which contributed most to the proper diffusion and to the purest and most intellectual conception of it;—we mean the German branch. Even the different Confessions of Faith are divided according to the races. The Greek Church prevails among

the Sclavonian race ; the Roman Catholic among the Celtic and Latin ; and Protestantism among the German. Single and insignificant exceptions are, in this case, as in that of Quetelet's great inquiries into human statistics, of little importance. Here we have a very simple, and the only sound, solution of the question, how it has happened that Protestantism, since its first appearance, has made no important advance in its extension. Another practical application of these principles presents itself. So long as the natural organization of certain tribes of mankind (for example, of some of the South Sea Islanders) shall continue so imperfect as it at present is, and unimproved by crossing with the European stock, it will be fruitless to expend so much money and labour in attempting to convert them to Christianity. The experience of the missionaries establishes the soundness of this view."

The means of tracing the connection of creeds with national development of brain, are presented in a very accessible form in an "Ethnographic map of Europe, or the different nations of Europe traced according to race, language, religion, and form of government," by Dr Kombst ; published in Edinburgh by J. Johnstone, and W. & A. K. Johnston.

Article VI. is a refutation of objections to Phrenology advanced by Dr C. Rathen of Hamburgh. The same course of events is now taking place in Germany which occurred in this country twenty years ago. Men ignorant of Phrenology as a practical science, step forward and state objections to it as if it were a pure hypothesis, and without even giving themselves the trouble to understand it correctly as a hypothesis. The refutation of their objections is accomplished simply by exposing their ignorance, misconceptions, and misrepresentations. This is an irksome and unprofitable task, but a necessary one ; because, so long as the public are ignorant, such writers will abound, and the acknowledged failure of all his predecessors never presents to the latest opponent any obstacle sufficient to deter him from taking the field with the full confidence that *he* will triumph. Among the innumerable refutations of Phrenology which have been published in Britain, and, for a moment, trumpeted by the press as "fatal overthrows," which one now lives, or is acknowledged by any person even moderately acquainted with the subject, *to be* a refutation ? Not one ! And the case will be the same in Germany. Meantime, we congratulate our friends in that country, that, in the editors and contributors to their Journal, they possess an array of able writers who will leave not one leaf of laurel on the brows of any opponent, be he physiological or philosophical.

Article VII. is an able notice, by Dr Hirschfeld, of Dr Carus's *Atlas of Cranioscopy*, Part I., containing drawings of the skulls of Schiller, Talleyrand, a Greenlander, a Cretin, Napoleon, an ancient Scandinavian, a Caffre, and a Bali. We have already noticed Dr Carus's views (xv. 154; xvi. 408); and there is nothing new in the present production.

Article VIII. is a phrenological analysis of the character of Dr Justinus Kerner, by Dr Castle, which also has been already noticed in this Journal, vol. xvi. p. 296.

Article IX. contains an interesting notice, by Dr Scheve, of "The Central Archives for Medical Knowledge for the whole States of Germany, by Dr J. B. Freidreich."

Article X. consists of miscellaneous notices, which are interesting and instructive, and shew that the progress of the science in Germany is satisfactory.

The Number concludes with an able and interesting account, by Dr Scheve, of the crime, character, and cerebral development of Christina Beckenbach, who was decapitated at Heidelberg, on 22d January 1844, for poisoning her husband with arsenic. The skull, of which four lithographic views are given, is remarkably well drawn, and presents the usual appearance found in such characters. The base of the brain, particularly at Destructiveness and Secretiveness, is very large, and the coronal region shallow in proportion. Veneration is particularly defective; and she told Dr Scheve, who knew her before she poisoned her husband, that although she could repeat the Lord's Prayer and the Creed, she "could never pray one word within her own mind." The article contains some sound and touching remarks on capital punishment; and Dr Scheve most justly asks, "Who among us can assert that he, if born with an organization like Beckenbach's, and trained as she was, would not also have acted as she did?" He condemns this infliction as uncalled for by sound policy, and unjustifiable in reason. There is a mildness of spirit and soundness of thinking in this and in Dr Scheve's other articles, which invest them with a peculiarly engaging quality, calculated to exercise a very beneficial influence on the reader's mind.

The length to which this notice has extended prevents us from now entering on No. VI. of the Journal, which also we have received.

II.—*Vestiges of the Natural History of Creation.* London :
John Churchill. 1844. Post 8vo, pp. 390.

This is a bold, original, and interesting work, calmly and philosophically written. Although the author has restrained his imagination, and subjected his thoughts and style to the guidance of his understanding, yet the grandeur of the conceptions, and the occasional bursts of eloquence which occur in his pages, produce the effect of a great historical poem.

As the boundaries of science become extended, the conclusion is rendered more and more probable, that the Deity, when he created the material universe, conferred upon it such properties, and prescribed to it such modes of action, that all subsequent phenomena have resulted from its original constitution, without any new or special interference on the part of the great Governor and Upholder of all things. In the present imperfect condition of human knowledge, and considering the small portion of the mighty drama of the universe which our race, so recently created, has had an opportunity of witnessing, demonstrative evidence of the opinion referred to is hardly to be looked for, and most inquirers have even concluded that science, in its details, is adverse instead of favourable to the hypothesis. The author of *Vestiges of the Natural History of Creation*, assuming the likelihood that every event since the creation—every new appearance, whether in the mineral, vegetable, or animal kingdoms—has resulted from general laws originally impressed upon the universe, makes it his business to shew that the details of science are really less opposed to this view than has often been believed, and that the great events of the remote past are still dimly represented on a reduced scale by analogous observable phenomena.

Starting with nebulous matter, as apparently the first condition in which all existing bodies have been, he expounds the manner in which (according to recent astronomers) suns, planets, and satellites, have successively been developed. He next proceeds to consider the “constituent materials of the earth, and of the other bodies of space;” and observes, “that the nebular hypothesis almost necessarily supposes matter to have originally formed one mass. We have seen the same physical laws preside over the whole.” The inference deduced is, that the whole consist of similar elements, “under the qualification that, possibly, various bodies, under peculiar circumstances attending their formation, may con-

tain elements which are wanting, and lack some which are present in others, or that some may entirely consist of elements in which others are entirely deficient." If we admit such extensive differences, it seems incorrect to say that "the whole consist of similar elements." The term "element," he remarks, is applied by the chemist to a certain limited number of substances (fifty-four or fifty-five are ascertained), which, in their combinations, form all the matter of every kind present in and about our globe. "It has, indeed, been surmised that these so-called elements are only modifications of a primordial form of matter, brought about under certain conditions; but if this should prove to be the case, it would little affect the view which we are taking of cosmical arrangements. Analogy would lead us to conclude that the combinations of the primordial matter, forming our so-called elements, are as universal or as liable to take place every where as are the laws of gravitation and centrifugal force. We must, therefore, presume that the gases, the metals, the earths, and other simple substances (besides whatever more, of which we have no acquaintance), exist, or are liable to come into existence under proper conditions, as well in the astral system, which is thirty-five thousand times more distant than Sirius, as within the bounds of our own solar system, or our own globe."—P. 28.

The natural history of the earth is next discussed, and a succinct and lucid account is given of the common theory of the formation of the primary and subsequent rocks. This is so well known, that it is unnecessary to state it in detail. The primary rocks "contain none of the petrified remains of vegetables and animals which abound so much in subsequently formed rocks, and tell so wondrous a tale of the past history of our globe."

The secondary rocks are formed in a great measure from the substance of those which went before them; but limestone, composed of lime and carbonic acid, now appears, and the latter is an ingredient which had not been met with in the primary rocks.* Carbon, an element of this acid, is also the main ingredient in organic things. "There is reason to believe that its primeval condition was that of a gas, confined in the interior of the earth, and diffused in the atmosphere." Marine polypes are capable of appropriating this gas, in connexion with lime, from the waters of the ocean, where it is held in solution, and they deposit it in coral reefs equal in

* Such is the author's proposition; but he must have forgotten that limestone is found in small quantities as a primary rock—in Glen Tilt and on the banks of Loch Earn, for example.

extent to many strata. *The appearance of limestone beds, then, is presumed to be connected with the commencement of organic life upon our planet*, and, indeed, a consequent and a symptom of it. As 16,000 cubic feet of carbonic acid gas are locked up in every cubic yard of limestone, and as carbon forms 64 to 75 per cent. of coal, an enormous quantity of it must at one time have been in the atmosphere. An atmosphere highly charged with carbonic acid gas would be incapable of supporting land animals. Accordingly, the first organised beings traced in the history of the globe are zoophytes, polypes, and a few single and double valved shell-fish (mollusks), all of them creatures of the sea.

Ascending to the next groups, the traces of life become more abundant, and sea-plants appear. The numbers of species are greater, and the animals are of a higher class. When we arrive at the old red sandstone formation, fishes become abundant, and marine plants continue to multiply; but no land animals or plants are found, for apparently no dry land yet existed. With the secondary rocks or carboniferous formation, land was formed, and land-plants are here traced in prodigious abundance. Gigantic shrubs, fostered by a warm climate, and a vast supply of carbonic acid gas in the atmosphere, flourished, were swept away by torrents, were deposited at the bottoms of lakes, or of the sea, and formed beds of coal. In the era of the new red sandstone, terrestrial zoology commences with reptiles, and traces of birds are met with. In the era of the oolite begin the mammalia; and in that of the more superficial formations, we find the commencement of the present species.

After giving, in detail, this history of the globe, the author arrives at the question, "In what way was the creation of animated beings effected? The ordinary notion may, I think, be not unjustly described as this,—that the almighty Author produced the progenitors of all existing species by some sort of personal or immediate exertion. But how does this notion comport with what we have seen of the gradual advance of species from the humblest to the highest? How can we suppose an immediate exertion of this creative power at one time to produce zoophytes, another time to add a few marine mollusks, another to bring in one or two conchifers, again to produce crustaceous fishes, again perfect fishes, and so on to the end? This would surely be to take a very mean view of the creative power,—to, in short, anthropomorphize it, or reduce it to some such character as that borne by the ordinary proceedings of mankind." "Some other idea must then be come to, with regard to *the mode* in which the divine Author

proceeded in the organic creation." Let us seek in the history of the earth's formation for a new suggestion on this point. We have seen powerful evidence, that the construction of this globe and its associates, and inferentially that of all the other globes of space, was the result, not of any immediate or personal exertion on the part of the Deity, but of natural laws which are expressions of his will. What is to hinder our supposing that the organic creation is also a result of natural laws, which are in like manner an expression of his will? More than this, the fact of the cosmical arrangements being an effect of natural law, is a powerful argument for the organic arrangements being so likewise; for how can we suppose that the august Being who brought all these countless worlds into form, by the simple establishment of a natural principle flowing from his mind, was to interfere personally and specially on every occasion when a new shellfish or reptile was to be ushered into existence on *one* of these worlds? Surely this idea is too ridiculous to be for a moment, entertained."

This is the theory to announce, elucidate, and support which, the book has evidently been written; and we regret that we cannot enter into the scientific details by which plausibility is given to it. The work takes an extensive survey of the phenomena of the world, physical, vegetable, and animal, and refers constantly to authorities in science for the statements which it propounds; and it is so concisely written, that justice cannot be done to it in an analysis. The style, also, is at once so simple, correct, and concentrated, that abridgment is almost impossible. We must again, therefore, allow the author to speak for himself. "The idea," says he, "which I form of the progress of organic life upon the globe—and the hypothesis is applicable to all similar theatres of vital being—is, *that the simplest and most primitive type, under a law to which that of like-production is subordinate, gave birth to the type next above it, that this again produced the next higher, and so on to the very highest*, the stages of advance being in all cases very small—namely, from one species only to another; so that the phenomenon has always been of a simple and modest character. Whether the whole of any species was at once translated forward, or only a few parents were employed to give birth to the new type, must remain undetermined; but, supposing that the former was the case, we must presume that the moves along the line or lines were simultaneous; so that the place vacated by one species was immediately taken by the next in succession, and so on back to the first, for the supply of which

the formation of a new germinal vesicle, out of inorganic matter, was alone necessary. Thus, the production of new forms, as shewn in the pages of the geological record, has never been any thing more than a new stage of progress in gestation ; an event as simply natural, and attended as little by any circumstances of a wonderful or startling kind, as the silent advance of an ordinary mother from one week to another of her pregnancy." P. 223.

The author argues, that " to a reasonable mind the Divine attributes must appear, not diminished or reduced in any way, by supposing a creation by law, but infinitely exalted. It is the narrowest of all views of the Deity, and characteristic of a humble class of intellects, to suppose him acting constantly in particular ways for particular occasions. It, for one thing, greatly detracts from his foresight, the most undeniable of all the attributes of Omnipotence. It lowers him towards the level of our own humble intellects. Much more worthy of him it surely is, to suppose that all things have been commissioned by him from the first." P. 156.

In support of these views, the author adduces the well-known facts of organic development. " Each animal passes, in the course of its germinal history, through a series of changes, resembling the *permanent forms* of the various orders of animals inferior to it in the scale." P. 198. This is illustrated by many striking examples ; but we hasten on to Man. After expounding the Macleay system of animated nature, he adds, " Man, then, considered zoologically, and without regard to the distinct character assigned to him by theology, simply takes his place as the type of all types of the animal kingdom, the true and unmistakeable head of animated nature upon the earth." P. 272. " It may be asked, Is the existing human race the only species designed to occupy the grade to which it is here referred ? Such a question evidently ought not to be answered rashly ; and I shall therefore confine myself to the admission, that, judging by analogy, we might expect to see several varieties of the being, *homo*. There is no other family approaching to this in importance, which presents but one species. The *corvidæ*, our parallel in *aves*, consist of several distinct genera and sub-genera. It is startling to find such an appearance of imperfection in the circle to which man belongs ; and the ideas which rise in consequence are not less startling. Is our race but the initial of one grand crowning type ? Are there yet to be species superior to us in organization, purer in feeling, more powerful in device and art, and who shall take a rule over us ? There is in this nothing improbable on other grounds. The

present race, rude and impulsive as it is, is perhaps the best adapted to the present state of things in this world ; but the external world goes through slow and gradual changes, which may leave it in time a much serener field of existence. There may then be occasion for a nobler type of humanity, which shall complete the zoological circle in this planet, and realize some of the dreams of the purest spirits of the present race." P. 276.

From an examination of languages, and many physiological facts, the author assumes that the human race is *one* ; and he regards their development to have probably taken place on the borders of India. He remarks, that " we should expect man to have originated where the highest species of the quadrumana are to be found. Now, these are unquestionably found in the Indian archipelago." " After all," he continues, " it may be regarded as still an open question, whether mankind is of one or many species. The first human generation may have consisted of many pairs, though situated at one place ; and these may have been considerably different from each other in external characters." P. 297. He discards the opinion that the human race were originally civilized and fell back into barbarism. Wherever the brain is highly developed in the moral and intellectual regions, with an active temperament, there civilization, including laws, industry, and the useful and ornamental arts, will unfold themselves, as the natural fruits of the mental soil. The author shews, however, that, " to have civilization, it is necessary that a people should be numerous and closely placed ; that they should be fixed in their habitations, and safe from violent external and internal disturbances ; that a considerable number of them should be exempt from the necessity of drudging for immediate subsistence." " All civilizations as yet known," he adds, " have taken place in regions physically limited."

The author's views of the human race are summed up in the following passage :—" All of these phenomena (namely the diversities of mankind) appear, in a word, to be explicable on the ground of *development*. We have already seen, that various leading animal forms represent stages in the embryotic progress of the highest—the human being. Our brain goes through the various stages of a fish's, a reptile's, and a mammifer's brain ; and finally becomes human. There is more than this ; for, after completing the animal transformations, it passes through the characters in which it appears in the Negro, Malay, American, and Mongolian nations, and finally is Caucasian. The *face* partakes of these alterations."

He supports this statement by a quotation from Lord's *Popular Physiology*, explaining observations by M. Serres, and proceeds,—“*The leading characters, in short, of the various races of mankind, are simply representations of particular stages in the development of the highest or Caucasian type.* The negro exhibits permanently the imperfect brain, projecting lower jaw, and slender bent limbs, of a Caucasian child, some considerable time before the period of its birth. The aboriginal American represents the same child nearer birth. The Mongolian is an arrested infant newly born. And so forth. All this is as respects form; but whence colour? . . . *May not colour depend upon development also?* We do not, indeed, see that a Caucasian fœtus, at the stage which the African represents, is any thing like black; neither is a Caucasian child yellow, like the Mongolian. There may, nevertheless, be a character of skin, at a certain stage of development, which is predisposed to a particular colour when it is presented as the envelope of a mature being. Development being arrested at so immature a stage in the case of the negro, the skin may take on the colour as an unavoidable consequence of its imperfect organization,” &c. P. 308.

The author adopts Phrenology as the true philosophy of mind; and, in the section on the “mental constitution of animals,” observes that the mental faculties—which, in mature man, appear in an indefinite potentiality and range of action—present a different aspect among the brute creation. “They are there,” says he, “comparatively definite in their power and restricted in their application. The reader is familiar with what are called instincts in some of the humbler species, that is, an uniform and unprompted tendency towards certain particular acts, as the building of cells by the bee, the storing of provisions by that insect and several others, and the construction of nests for a coming progeny by birds. This quality is nothing more than a mode of operation peculiar to the faculties in a humble state of endowment, or early stage of development. The cell-formation of the bee, the house-building of ants and beavers, the web-spinning of spiders, are but primitive exercises of Constructiveness, the faculty which, indefinite with us, leads to the arts of the weaver, upholsterer, architect, and mechanist, and makes us often work delightedly where our labours are in vain, or nearly so. The storing of provisions by the ants is an exercise of Acquisitiveness,—the faculty which with us makes rich men and misers. A vast number of curious devices, by which insects provide for the protection and subsistence of their young, whom they are perhaps never to see, are most pro-

bably a peculiar restricted effort of Philoprogenitiveness. The common source of this class of acts, and of common mental operations, is shewn very convincingly by the melting of the one set into the other. Thus, for example, the bee and bird will make modifications in the ordinary form of their cells and nests, when necessity compels them. Thus, the Alimentiveness of such animals as the dog, usually definite with regard to quantity and quality, can be pampered or educated up to a kind of epicurism, that is, an indefiniteness of object and action. The same faculty acts limitedly in ourselves at first, dictating the special act of sucking; afterwards it acquires indefiniteness. Such is the real nature of the distinction between what are called instincts and reason, upon which so many volumes have been written without profit to the world. All faculties are instinctive, that is, dependent on internal and inherent impulses. This term is therefore not specially applicable to either of the recognised modes of the operation of the faculties. We only, in the one case, see the faculty in an immature and slightly developed state; in the other, in its most advanced condition. In the one case it is *definite*, in the other *indefinite*, in its range of action. These terms would perhaps be the most suitable for expressing the distinction." P. 343.

The author concludes, that "the difference between mind in the lower animals and in man, is a difference in degree only; it is not a specific difference." "The grades of mind, like the forms of being, are mere stages of development. In the humbler forms, but a few of the mental faculties are traceable, just as we see in them but a few of the lineaments of universal structure. In man, the system has arrived at its highest condition. The few gleams of reason, then, which we see in the lower animals, are precisely analogous to such a development of the fore-arm as we find in the paddle of the whale. Causality, Comparison, and other of the nobler faculties, are in them *rudimental*." P. 347. The author subsequently observes, that we are "strikingly distinguished from them by this great advance in development;" but he appears to be inconsistent with himself when he adds: "We have faculties in full force and activity which the lower animals either *possess not at all*, or in so low and obscure a form, as to be equivalent to non-existence." On the hypothesis of development, man's noblest attributes existed, in a rudimental form, in the lowest animal being.

In the section on the "purpose and general condition of the animated creation," the author remarks:—"That enjoyment is the proper attendant of animal existence, is pressed

upon us by all we see and all we experience." P. 361. "To secure the immediate means of happiness, it would seem to be necessary for men first to study with all care the constitution of nature; and, secondly, to accommodate themselves to that constitution, so as to obtain all the realizable advantages from acting conformably to it, and to avoid all likely evils from disregarding it." P. 380. "Obedience (to the laws proclaimed by the constitution of nature) is not selfishness, which it would otherwise be—it is worship." P. 382.

Such is a very meagre and imperfect outline of this interesting and original work. We have been constrained by our limits to omit the facts in science by which the author supports his hypothesis, and to confine ourselves to a mere sketch (wherever possible, in his own words) of his general argument; but we assure our readers that there is an array of analogies, if not of direct facts, so ample and so well supported by authority, as to give the work a serious and truly philosophical character. His authorities, it is true, are not always of the highest order; he is sometimes one-sided in his judgment of facts, and he does not everywhere state them with rigid accuracy: but these blemishes are, perhaps, inseparable from the vastness of the field of science from which the facts have been derived, and from the consequent impossibility of any one mind being able successfully to scrutinize all their details. The general bearing of the evidence, however, is not affected by these imperfections; and, startling or even extravagant as the main idea, that of development, may appear to be, it has already presented itself, on reflection, to some of the highest minds as more than a probability. Thus, in a letter to Mr Lyell, published in Babbage's *Ninth Bridgewater Treatise*, page 203, Sir John Herschel, alluding to "that mystery of mysteries, the replacement of extinct species by others," says,—“Many will doubtless think your speculations too bold, but it is as well to face the difficulty at once. For my own part, I cannot but think it an inadequate conception of the Creator, to assume it as granted that his combinations are exhausted upon any one of the theatres of their former exercise, though in this, as in all his other works, we are led, by all analogy, to suppose that he operates through a series of intermediate causes, and that, in consequence, the origination of fresh species, could it ever come under our cognizance, would be found to be a natural, in contradistinction to a miraculous, process—although we perceive no indications of any process actually in progress, which is likely to issue in such a result.”

Unquestionably, the hypothesis of the author is far from being *proved* to be true ; but he has invested the principle of evolution or development of animal existence with so much importance and plausibility, that we venture to predict that it will henceforth command much more of the serious attention of philosophers than it has hitherto done ; and that this work will lead either to its refutation, or to its establishment on sufficient evidence, and thus equally confer a benefit on science. In the mean time, the work is a valuable contribution to philosophy in the right direction. It gives a strong support to the doctrine of the government of creation, animated and inanimate, by general laws designed by the Creator from the first. It shews (even allowing its leading idea not to be established), that we live in the midst of a system of universal *causation*, to which we must accommodate our conduct, if we wish to enjoy life. In the words of the author :—“ It will be of no avail to sit down and expect that things are to operate of their own accord, or through the direction of a partial Deity, for our benefit ; equally so were it, to expose ourselves to palpable dangers, under the notion that we shall, for some reason, have a dispensation or exemption from them : we must endeavour so to place ourselves, and so to act, that the arrangements which Providence has made impartially for all may be in our favour, and not against us ; such are the only means by which we can obtain good and avoid evil here below.” P. 381. The tendency of all science is to lead us to the same conclusions ; and some of the practical results of such views are already beginning to manifest themselves. The movements in Britain for obtaining well-drained and well-ventilated dwellings, and also baths, and open parks for air and exercise, for the people, all proceed on the principle of realizing the natural conditions of health as a preliminary to enjoying it. But this is only a beginning : our religion, our laws, our literature, and our social habits, all need a reformation, in which effect shall be given to the already ascertained influences of causation. The present treatment of paupers and criminals, for example, is at variance with every notion of the world’s being governed on the principle of cause and effect : We deliberately allow all the natural conditions calculated to produce and multiply these unfortunate beings to flourish around us, and then wonder at the increase of crime and destitution ; nay, we go farther, we wreak our vengeance on offenders against the law for becoming what our treatment has tended to make them ; for what can be the effect of short imprisonments of young delinquents in com-

mon jails, but to ripen the beginners into mature and dangerous criminals?

"The sum," says the author, "of all we have seen of the psychological constitution of man is, that its almighty Author has destined it, like every thing else, to be developed from inherent qualities, and to have a mode of action depending solely on its own organization. Thus the whole is complete on one principle. The masses of space are formed by law; law makes them in due time theatres of existence for plants and animals; sensation, disposition, intellect, are all, in like manner, developed and sustained in action by law. It is most interesting to observe into how small a field the whole of the mysteries of nature thus ultimately resolve themselves. The inorganic has one final comprehensive law—GRAVITATION. The organic, the other great department of mundane things, rests, in like manner, on one law, and that is—DEVELOPMENT. Nor may even these be, after all, twain, but only branches of one still more comprehensive law, the expression of that unity which man's wit can scarcely separate from Deity itself."

III. *Société Phrenologique de Paris. Séance Annuelle de 1841-1842. Publication de la Société.* Paris: Chez J. B. Baillière. 8vo. Pp. 100.

This Report of the proceedings of the Phrenological Society of Paris, is alike creditable to the talent, and the zeal and industry, of the members of that institution. It consists of a preface and four articles, each of considerable length, especially the second and third. The preface, dated 25th January 1843, has the signature of Dr Marchal de Calvi, the general secretary. It asserts the marked progress which Phrenology has made in public opinion. There are few medical men, it observes, who do not admit its truth, to at least a limited extent. To lead them to an avowal, Dr Marchal forces them to shew the grounds of their opinion; and he always finds the most sturdy negators the most imperfectly informed, and the most engrossed by the pursuit of their own selfish interests. This description, we can bear witness, is not confined to France in its applicability. He adds, that the labours in the physiology and pathology of the nervous system, daily confirm the phrenological views, often against the wish of the investigators. He mentions another proof of the progress of Phrenology in France,—namely, that a thief was acquitted by a Court of Assize, on the evidence of medical witnesses

that the accused was afflicted with the monomania of theft and had the acquisitive organ very largely developed. Dr Marchal most properly condemns the *acquittal* of so dangerous a person; but thinks the evidence quite sufficient to have warranted his being put under proper restraint and treatment. In this, every phrenologist, who entertains just views on the subject of criminals and their treatment, will concur. The Doctor concludes by remarking that it is the unceasing conquests of the science without parade that chiefly irritate its adversaries. This kind of triumph, says he, is to them more annoying than that which comes by enthusiasm.

The first article is a discourse by Professor Bouillaud, member of the Chamber of Deputies, and president of the Society. This discourse most of our readers would consider rather elementary for their state of progress. It analyzes Phrenology as a science of mind and man, and not, as it is vulgarly supposed to be, a mere handling of heads to discover bumps (*bosses*). It repels the charge that Phrenology leads to atheism, and quotes Gall's arguments, actually drawn from this science, for the existence and attributes of God. It then goes into the question of the localization of the organs, which the author illustrates by the heads of known great men; adding a candid avowal, that, notwithstanding the immense extent of the discoveries of Gall and Spurzheim, there is much yet to be done before Phrenology shall have arrived at the rank of a certain science. He concludes with a compliment to "*ce beau pays*," "France, the Queen of civilized nations," from *whom* Phrenology, like the Revolution of 1789, is destined to spread over the world, and by *whom* Gall, persecuted in his lifetime, shall have a statue erected to his memory.

The second article is an account of the labours of the Phrenological Society during the years 1841-2, by the secretary, already mentioned, Dr Marchal de Calvi. After some justly severe remarks upon the ignorance of the enemies of Phrenology—especially of Napoleon, whose imperial condemnation of the doctrine of Gall he exposes as especially silly—the secretary gives a sort of *precis* of the communications of the session, in none of which is there any thing new to the experienced phrenologist: for example, there is a case of a woman attacked with apoplexy, who, on recovery, was found to have retained every faculty but that of Language; she pronounced half words, and misapplied them, in the way well known to our readers. After some observations on the place of the organ of Language, the secretary cites a memoir by M. Bouillaud the president, which divides the facts in evi-

dence of the organ of Language, no less than sixty-five in number, into three categories. In the first are three facts, shewing that if, as a symptom of a disease, the faculty of Language can be *alone* suspended or abolished, it must exist independently of all other faculties, and have a special organ. In the second category are sixteen facts to prove that the organ is in the anterior lobe of the brain.* The facts of the third category are forty-six in number, and comprise the negative proofs—the preservation of the faculty of Language in cases where the anterior lobe of the brain remains uninjured, the rest of the brain being generally injured.—Dr Casimir Broussais furnishes a curious paper, entitled an Analysis of Huarte's Examination of the Geniuses fit for the cultivation of the Sciences,—a work of the sixteenth century, and dedicated to Philip II. of Spain. Huarte was remarkable for assigning a local site in the brain to each faculty which, in his age, was supposed to belong to the human mind; of course, a very imperfect localisation. Ambrose Paré also attempted a localisation of organs, as did some others.—The same Dr Broussais, the son of the deceased Dr Broussais who did so much for Phrenology in France, gives an analysis of the "Medicine of the Passions," by M. Descuret.—Papers are read on the manifestation of mental powers by the blind—on Phrenology applied to the drama.—Dr Fossati, with whose name we are familiar, brings before the society some communications from America on the subject of Phreno-mesmerism, of which all that the secretary says is, that they gave great amusement to the society.—Dr Fossati communicated papers on the application of Phrenology to education and government, and on comparative Phrenology.—The society congratulate themselves on an experiment of M. Voisin, which they call grand and solemn—the result communicated to the Royal Academy of Medicine—on 400 young criminals in the penitentiary of La Roquette, a commission of the Academy being the judges. The result of the examination of the heads was allowed by the officers of the establishment to be entirely satisfactory, in regard to the mental qualities inferred.—Dr Place furnished a paper on the development and character of the celebrated Cherubini, which the doctor published separately. A copy lies before us, and will be separately noticed.—Two sittings of the society were devoted to the consideration of Idiotism, to which Drs Gaultier and Seguin have devoted much attention. The general

* See a notice of some of M. Bouillaud's cases, in our eighth volume, p. 255. Pathology, we must add, gives discordant indications respecting the functions of this as of other parts of the nervous system.—Ed.

opinion was, that imbeciles, who are not utterly fatuous, are educable physically and generally,—an opinion in which we are much disposed to concur.—The secretary makes many indignant allusions, as he goes along, to the unfair treatment, and even persecution, which Phrenology meets with on the Continent, and considers it a most courageous act in one of the members of the society to have defended Phrenology publicly at the Scientific Congress at Strasbourg.* He adds, that candidates for offices have failed because they were phrenologists, and young men have been advised by their sage friends to desert the cause of Gall, as fatal to their prospects in life. In this country we are past that stage. The phrenological philosophy has too extensively mingled with, and elevated, human affairs, to be longer pleaded *against* its disciples.—The casts of certain atrocious criminals are judged of by the society, and found to correspond in development with their history. Fatalism and materialism are disposed of according to the phrenological views of these subjects, with which our readers are familiar.—This summary of the labours of the society of Paris concludes with acknowledging the co-operations, in extending the science, of other societies, both at home and abroad. The labours of Scotland and America are highly complimented, and the progress of the science in Denmark, Italy, Spain, and Portugal, alluded to. Edinburgh is chiefly distinguished; and this curious statement is made respecting our friend Mr Combe: “In Edinburgh flourishes George Combe—George Combe, who would this day have been professor of philosophy in that ancient Scottish university, *but for an intrigue hatched in Paris!*” This notion is quite new to us, and appears to be utterly groundless.—In a note, allusion is made to Dr Verity (without naming him), as having, before the French tribunals, founded on the supposed cessation of the existence of the Phrenological Society of Edinburgh, as a pretence for withholding from that body an important inheritance. This monstrous wrong, to the extent of fifteen thousand pounds, is still unredressed, in consequence of the unjust, the absurd law of France, as applicable to foreigners,—a law which is a disgrace to a civilized country. Could any one have believed that the French courts would solemnly declare themselves incompetent to try questions where both parties are foreigners? Such, however, is the fact; and Dr Verity sets at defiance even an order (which is all that the courts find themselves authorised to grant) to deposit for safety in the Bank of Consignation a portion of the funds entrusted

* See our sixteenth volume, p. 356.

to him as executor. In short, the law of France, while giving Dr Verity the power to obtain possession of the testator's funds, refuses even to hear the case of legatees prepared to establish their right to the greater portion of them. We understand that an application has been made to the British Government, with the view of procuring, through its influence, an alteration of the barbarous law in question. In Britain, the law gives its aid to foreigners and natives alike; and it is not to be imagined that any civilised country can now persist in retaining the odious distinction.

The third article is entitled "Answer to the Objections of Messrs Flourens and Leuret to Phrenology, by Dr Casimir Broussais, Professor of the Val de Grâce, Vice-President of the Society." "The first of these objectors," says Dr Broussais, "attacks us in the name of what he calls good philosophy; the other combats us with comparative anatomy." It will suffice our readers to know, that both objectors make fools of themselves, according to custom, and receive a very complete quietus from Dr Broussais. Phrenology, according to M. Flourens, commits the following atrocities, namely; it destroys "the unity of intelligence, the unity of our identity (*l'unité du moi*), our reason, freedom of will, morality, and religion." "These are grave accusations," says Dr Broussais; "they are not novel, it is true; it *is* true that they have been often answered; but it may be that the author of *l'Examen de la Phrénologie* relies upon them as proofs new and convincing? We shall see." Our readers have seen it all, and much more equally weak, already. With regard to M. Leuret, we need only say, that Dr Broussais apologises for wasting the time of the society with a detail of his extravagancies, and suddenly stops in disgust. We shall take the hint, and avoid beginning.

The fourth and last article is entitled "The Dramatic Art, as illustrated by Phrenology; Appreciation of Mr Kemble, and of Meses. Adelaide and Fanny Kemble, English Tragedians, from the busts of M. Dantan Jeune. By Dr Charles Place." After some rather long, and not very new, general observations on the principles of tragedy and comedy, and the histrionic art, which, it is truly said, depends chiefly on Imitation and Secretiveness, aided by many other faculties, the author proceeds to the busts of the three Kembles above named. He finds in that of Mr (we presume Charles) Kemble the organisation for the vigorous and manly characters of Shakspeare; in Miss Adelaide's the powers required by the musical drama, in its highest walk; and in Miss Fanny Kemble, the author—not unassisted, we presume, in her case,

as in the two preceding, by the well-known facts—finds an excellent combination of organs, all lending their aid to form the tragedian.

The Report of which we have attempted a description, serves to shew that the Phrenological Society of Paris were in 1841–2 alive and active. We hope that they are so still, and that they are destined to strike out new paths of instruction and delight in the boundless fields of Phrenology.

IV. Our Library Table.

1. *Blackwood's Magazine*, Sept. 1844.—This Magazine, twenty years ago the arch-foe and unsparing satirist of Phrenology,—in whose pages “fool and phrenologist” were pronounced to be “terms as nearly synonymous as can be found in any language,”—nay, which even applied to us the polite appellation of “these infernal idiots, the phrenologists,”—now gives such strong symptoms of relenting, as actually to proclaim, not only that the subject ought to be investigated, but that the fundamental principles of Phrenology are sound! In a review of Dr Prichard's *Natural History of Man*, in the September Number, we find the following passages:—“How far, then, has the outward form been altered by the changes induced by domestication? how far are instincts acquired by such changes capable of hereditary transmission? and is there any, and what, connexion between the changed instincts and the changed structure? These questions, involving, among other things, the infant and difficult science of Phrenology, Dr Prichard has left very much to conjecture. Whether he considers the data too imperfect, or is afraid of trusting himself with any decided expression of opinion on a subject which has been so obscured by charlatanry, and which is open to so much misapprehension, does not appear; but it certainly is an apparently striking defect, that where a large portion of the work is devoted to the explanation of the different forms of the cranium in the inferior animals, and in man, and to which the largest portion of his pictorial illustrations apply, he should give us so little insight into his opinions as to what extent Phrenology is fairly entitled to credibility. His having taken so much pains in collecting facts and drawings on this point, necessarily leads to the inference, that he attaches much value to the craniological distinctions.”—Pp. 315-16. And again:—“With regard to the skull, the value of the distinctions in its form and structure, depends upon their connexion with the size and organization

of the brain—involving the question, whether this has any, and what, influence upon the powers and habits of the creature. Dr Prichard, as we have already stated, blinks the question of Phrenology, though he makes some inferences which prove him to have a general belief in the connexion between mental power and physical formation; nay, further, in the appropriation of different portions of the brain to different faculties. Few will, we believe, in the present day be disposed entirely to deny, that, *cæteris paribus*, the external formation of the skull, or rather the shape of the brain, as shewn by the formation of the skull, is a general index of the mental power of the individual to whom it belongs. Look over a collection of busts or portraits of eminent men, and, with scarcely an exception, they will be found to have high and capacious foreheads; while uncivilized races, and born idiots, are lamentably deficient in this respect. The difficulties of Phrenology exist in its details, which by many have been carried out into degrees of subdivision, certainly not warranted either by the anatomical structure of the brain, or by any empirical data as to the form of different crania, and the biography of the individuals to whom they have belonged. Where, in the existing state of our knowledge, the proper mean may be, it is perhaps difficult to say; but it would have been well, we think, had Dr Prichard given us a little more explicitly his opinions as to what extent Phrenology (we use the word in its broadest sense) may be fairly relied on. As far as we can gather from the scattered passages in his book, he seems to take a rational view of it; but a little less caution would certainly have been more instructive to his readers, not only on the subject of Phrenology, but on many of the connexions between physical structure and the habits to which such structure is adapted. This is a *hiatus* in Dr Prichard's work, the filling up of which would add much interesting matter, and serve to weave together facts which at present are disjointed and isolated, giving the book a dry character, and preventing its arresting the attention of the reader."—Pp. 320–21.—We add an excellent suggestion by the same writer, as to the study of the infant mind:—"The psychological development of infants is a subject which has been strangely neglected by philosophers. A clever Italian authoress, who has written an anonymous work upon education, gives as the reason for the dearth of writing on this subject, that philosophers are not mothers, and that mothers are not philosophers. Be this as it may, few theorems appear to us more promising of interest. The struggle of internal force with external resistance, the feelings manifested in the acquisition

of new powers, the impressions made by objects seen for the first time, and first questions asked, form grounds for induction as to the psychology of man, which, thanks to the chartered tyranny of nursery-maids over philosophers, have been grossly neglected."—P. 322.

2. *Essay on Musical Composition. Biography and Phrenological Analysis of Cherubini, with Notes and Cranioscopic Plan.* Read to the Phrenological Society of Paris, 27th May 1842. By CH. PLACE. Paris, 1842. 8vo, pp. 28.—This essay is noticed in the Report of the Phrenological Society of Paris, of whose proceedings we have given a summary in the present Number. It is short, but written with spirit and eloquence. It takes the phrenological view of musical talent, and treats ably of Melody, Harmony, and Rhythm. It does not go so deeply into the subject as several writers in our Journal have done, yet it gives pleasure to the reader by much elegant illustration, and is the work of an accomplished mind. The biography of Cherubini is well written, but is scarcely connected with Phrenology. His name and works are well known to musicians. We must not follow the author into his examination of Cherubini's bust. It may suffice for our readers to know, that the organs and their combinations are shewn by the author to correspond closely with the character of that great musician. The essay was well received by the Society, and has had considerable success with the public.

3. *The Phrenological Almanac, or Psychological Annual.* No. IV. for 1845. Edited by D. G. GOYDER. Glasgow: J. and G. Goyder. 8vo, pp. 76.—The title of "Almanac" is rather unhappily applied to a work of which not a twelfth part has such a character. Not to dwell on this, however, we are glad to find a decided improvement in the present Number as compared with the last, and have no doubt that in its own sphere it will do good service for Phrenology. In the first article, entitled "Man, as a physical, moral, and intellectual being, considered phrenologically," some inquiry is made into the earliest condition and subsequent career of the human race. The writer maintains the original state to have been that of civilisation, from which the race declined; but the question must be viewed much more comprehensively, before satisfactory conclusions can be drawn. For our own part, we think the opposite hypothesis considerably more plausible than that of the author, whom we would refer to a work reviewed in our present Number, *Vestiges of the Natural History of Creation*, section on the "Early History of

Mankind." The general opinion of philosophers coincides with ours ; but on the other side are Dr David Doig, Bishop Sumner, Archbishop Whately and his disciple Dr W. Cooke Taylor, and, lastly, Mr Stark of Edinburgh, in whose ingenious paper " On the supposed Progress of Human Society from Savage to Civilised Life" (*Trans. of Royal Soc. of Edin.*, vol. xv. 177), an elaborate exposition of the arguments in favour of the original civilisation of man will be found.—In Article II. the natural, in contradistinction to a miraculous, origin of language is briefly and soundly maintained.—Article III. is an exposure of the quackeries of certain itinerant manipulators of heads, and, in particular, of the flatteries and absurdities of a Mrs H——, whose full name it is not difficult to conjecture. The bad effects of phrenological quackery are, not only to induce ridicule and disgust towards the science, but to confirm self-esteeming fools in their overweening estimates of their own talents, and to mislead parents into the idea that their children are prodigies.—Article IV. is entitled " Cases illustrative of the different Hypotheses of Phreno-Mesmerism, by Spencer T. Hall." These cases strongly support the author's conclusion, that although mental communion or sympathy on the one hand, and suggestive dreaming on the other, are, each in its own place, perfectly true, Phreno-Mesmerism, or the excitement of mental faculties by contact over their organs in the head, is, in *its* place, not less true. Some remarks which he adds on the amplification of the list of the faculties and organs deserve the attention of those who, like ourselves, are not yet prepared to admit that such amplification is inevitable. Let the subject be fully investigated by those who have leisure, opportunity, and sufficient qualifications ; and let all parties receive thankfully the results, whatever they may be, of properly conducted experiments.—Article V. contains an account of " the Liverpool District Provident Society," an admirable and useful institution, having for its object the bringing of the intelligent and benevolent portion of the community more into contact with the poor and indigent, for the purpose of improving the worldly means and the morals of the latter—of giving them the habits of industry and sobriety—of raising up in their minds a spirit of independence—and of assisting and educating their children.—Article VI. is a pungent and clever criticism, by Dr James C. L. Carson of Coleraine, of the article " Phrenology" in the *Popular Encyclopædia* ; where, it seems, sundry stale objections and misrepresentations have been re-cooked and served up.—The next paper is " Remarks upon, and extracts

from, an Essay entitled 'Fresh Thoughts and Suggestions on Phrenology,' which gained a prize at the Glasgow Mechanics' Institution." This paper was read to the Glasgow Phrenological Society several years ago. As a proof of the increasing attention paid to Phrenology, reference is made to "the number of competitors for the prizes offered by Mr Combe and others, to the students attending the different institutions in this city (Glasgow). Mr George Combe offered a prize of five guineas; Mr James McClelland, a member of this society, one of the same amount; and Dr Jeffrey, professor of anatomy in our university, intimated his intention also to give a prize; all for the best essay on the subject of Phrenology. There were five competitors for the first, three for the second, and three for the third. It is not unlikely that the same person may have written for more than one of the prizes, but I am not aware of such being the fact, except in one instance; so that it appears that not fewer than ten students, all of them young men, and some of them from the class of artisans, must have been studying with great zeal and industry, probably during the whole winter, this very useful and interesting branch of knowledge. With such a number of writers on the subject during one session, it is not easy to estimate the number who may have been reading, to a greater or less extent, the various phrenological works, and thus acquiring information on the true science of mind. But there is no doubt it must have been very great. This, then, must be gratifying to every phrenologist; and perhaps the circumstance at which we should most rejoice, and upon which phrenologists have great cause for congratulation is, that the subject of Phrenology has been at length considered worthy of being recommended for study, and given out for competition to the youth attending our *Alma Mater* itself, and this by, I believe, the senior professor in the University." The extracts given from the "Fresh Thoughts" indicate an amount of talent, which, if aided by more extended study and reflection, may produce something of permanent value. The suggestions of the essayist, though sometimes excellent, are at other times rather hastily thrown out. Phrenology has need of fresh thinkers and suggesters; but let them beware of putting forth crude notions instead of the ripe and well-tested results of a comprehensive survey of facts and arguments.—The remaining articles are, reviews of books; a phrenological sketch of the character of a "Political Parson," whom we easily recognize; a case where the dispositions and talents of a gentleman were inferred with great accuracy, by Mr Jonathan Barber, from a

statement of the cerebral development by Dr Weir ; "Intelligence," in which we find the ridiculous announcement that Mr Spencer Hall's mesmeric exhibitions have "excited an *unparalleled interest throughout the whole of England*;" a list of seventeen phrenological societies—one of them, at Rothesay in Bute, of recent formation ; names of lecturers ; and, lastly, three pages of tables appropriate to an almanac. Some readers will smile at what they may denominate the vanity displayed by the editor in placing his own portrait opposite the title-page ; but to his personal friends, the engraving, which seems a good likeness, will be, as it is to us, not unacceptable.

4. *The New Moon ; or, Crichton Royal Institution Literary Register*, No. I.—The idea of starting a journal to be edited, written, and corrected, by inmates of a lunatic asylum, is excellent ; for the mental stimulus and occupation which both readers and writers will derive from it, must, in general, be highly salutary. The first number is a creditable production ; it consists of a prospectus, several poems, "Intelligence," and an excellent essay "On the Obligation and Influence of Parental Example." Any profit that may be realized by the sale of this psychological curiosity is, we understand, to be employed in forming a fund out of which small sums of money will be paid to pauper patients on their dismissal from the asylum. On every account we wish it success.

5. *Phrenologische Untersuchung, des Doktor David Friedrich Strauss, nebst einer Antikritik auf Dr Scheve's Bemerkungen über Seite 57 der Analyse des Characters Dr Justinus Kerners*, von M. CASTLE, Med. Dr., &c. &c. Heilbronn, 1844." As the original English "Phrenological Analysis of Daniel [correctly *David*] Strauss, D.D.," of which this is only a translation into German, has already appeared at full length in the *Zoist*, No. VII., we beg to refer our readers to that publication. The analysis is acute and interesting, and well worthy of a careful perusal.

IV. INTELLIGENCE, &c.

- *Edinburgh.*—At a meeting of the Phrenological Society, held on 9th December, the following gentlemen were elected office-bearers for the ensuing year:—Sir George S. Mackenzie, Bart., *President* ; Charles Maclaren, Andrew Dun, George Monro, and George Cox, *Vice-Presidents* ; James Simpson, Andrew Combe, M.D., Peter Couper, James Tod,

Patrick Neill, LL.D., and Francis Farquharson, M.D., *Councillors*; and Robert Cox, *Secretary and Curator of Museum*. The following books were presented:—"Delle Malattie della Mente ovvero delle diverse Specie di Folle. Opera di Luigi Ferrarese, Dottore in Medicina. Napoli, 1841-3." Vols. I. and III. Presented by the Author. And "Discurso que despues de instituida la Sociedad Frenologica Mallorquina, pronunzió ante ella su Presidente Don José O'Rian en Palma de Mallorca, el dia 28 de Marzo de 1844." Presented by the Majorca Phrenological Society.—The thanks of the Society were voted to Dr Ferrarese and the Majorca Phrenological Society for these donations; and Mr Combe (who had seen Dr Ferrarese last winter in Naples) having detailed to the meeting some interesting particulars of the history of that physician, from which it appeared he had suffered severely in the cause of Phrenology and enlightened views generally, the meeting instructed the Secretary to express to him their warm sympathy, and their high admiration of his exertions to spread useful knowledge among his countrymen. (We shall say more of Dr Ferrarese in next number.) With respect to the Society's lawsuit against Dr Verity of Paris, the executor of Dr Robertson, it was reported to the meeting, that, in virtue of the decree of the Cour Royale, ordering Dr Verity to consign for safety 30,000 francs (see *ante*, xvii. 104), which order had been disregarded, Dr Verity's furniture &c. had been seized and sold; that he had appealed to the Court of Cassation against the judgment of the Cour Royale; and that the appeal stands over for argument, and may not be disposed of for some months, in consequence of the number of cases in arrear before the Supreme Court.

Lectures on Phrenology.—The following lectures have lately been delivered:—

1. A course of ten lectures at *Berlin*, last spring, by Dr Hirschfeld of Bremen. Of these, two were devoted principally to anatomical explanations; four to the principles of Phrenology and the illustration of the cerebral organs; and two more to some applications of Phrenology to questions in ethics. Apparently the last made the greatest impression on the audience. The course was attended by from 30 to 40 persons, amongst whom were a few ladies, several professors, officers, medical men, and teachers. Some of the teachers in particular seemed to take a great interest in the subject, and stated to Dr H., after the last lectures, that they had already introduced it into their professional meetings.

2. A course by Mr Richard Beamish, F.R.S., in October, at *Cork*, for the benefit of the Lying-in Hospital of that town. The *Southern Reporter* of 12th October, speaks of these lectures as "going on with increased interest and attraction. Every successive evening adds to the number and respectability of his audience, while it develops new characteristics of a science which is invested with all the charms that popular assembly requires. This is peculiarly the case as regards Mr Beamish's mode of lecturing. There are no dry and abstruse disquisitions which puzzle, while they fatigue—no unnecessary technical phraseology, which shrouds the subject in a mist, impervious to vulgar eyes—no; all his observations he illustrates by some agreeable anecdote, some relation of facts, which both please and convince; at the same time that his language is plain and intelligible, yet in no wise wanting dignity and elevation. Mr Beamish must, for these and other reasons, always be a popular lecturer; but his audience on yesterday evening leaves no doubt upon the subject. The lecture-room was filled well-nigh to suffocation, many being only too happy to get accommo-

dation in the passage. A great number of ladies were present." A correspondent of the same newspaper addresses Mr Beamish, on 7th November, thus:—"Many persons who had the pleasure of attending your lectures on Phrenology and Education, would be very happy to hear you intend to publish them, and should you be persuaded to do so, I venture to predict they will be read with profit by thousands. There is no subject, of equal importance, so imperfectly understood as Physiology, even by those who possess the advantages of a good education; as for those who do not, I believe I shall not exaggerate if I say they know actually nothing of the natural laws, which can never be infringed with impunity, and which 'tis scarcely possible for those to obey who live in profound ignorance of their existence."

3. Six Lectures at *Derby*, by Mr C. Donovan. "Since the visit of Dr Spurzheim to Derby, shortly before his death," says the *Derby Reporter* of 1st November, "little has been done to revive the interest then excited in favour of Phrenology, till within the last few weeks, when Mr Donovan, of London, delivered a course of lectures on the subject—(notices of which have appeared in our columns)—in the Hall of the Mechanics' Institution, to large and increasing audiences. At the close of these lectures, Mr Donovan was induced to remain in this town for some time longer, in order to meet the wishes of a number of the members of the Institution, by instructing them in the art of making practical observations in phrenological science by manipulation, &c. This class (numbering about thirty members) received the last of their course of lessons (six in all) on Monday evening last, when a vote of thanks to Mr Donovan, expressive of the most unqualified satisfaction, was unanimously agreed to, and a resolution carried, that the members then assembled should form a class for the regular study of the functions of the brain, as the true basis of mental science." Mr Donovan had previously delivered, on 3d October, a lecture to the Archæological Society at Warwick. At its close, a vote of thanks having been proposed by the Rev. Dr Marsh, the proposition, says the *Warwickshire Standard*, "was carried by acclamation; and the chairman (Rev. Thomas Hope), in communicating the same to the lecturer, expressed his opinion, that the science upon which he had addressed the meeting in so lucid a manner, was well calculated to produce much individual happiness, social comfort, and general welfare." Mr Donovan has delivered another lecture in the same town, introductory to a course; two at *Leamington*, with the same object; and two at *Nottingham*. At the conclusion of his first lecture at Leamington, the Rev. Mr Clayton, the vicar, proposed, and the Rev. Mr Medwyn seconded, an expression of approbation and satisfaction.

4. A course at the Assembly Rooms, *Sheffield*, by Mr E. T. Craig, in October and November to crowded audiences. At the close of each lecture he manipulated the heads of several individuals, and is said to have been remarkably successful in deducing their mental peculiarities.

5. Several lectures at the Mechanics' Institution, *Sligo*, in November, by Mr Alexander Wilson of Dublin. On 3d December he delivered a lecture in Hudson's large room there, in aid of the funds of the Institution. On this occasion, as we learn from the *Sligo Journal*, of 6th December, Dr Little, surgeon to the Sligo Infirmary, "favoured the meeting with a short but forcible address, illustrative and confirmatory of the phrenological theory." Thanks were voted to Mr Wilson, whom, by the way, the paragraph in the newspaper styles "Professor,"—we hope without any sanction from himself.

6. At the Polytechnic Institution, *Southampton*, "on Wednesday evening, Mr J. R. Stebbing delivered a very able and interesting lecture

before a highly respectable audience of the members and friends of the Institution, on the Principles of Phrenology. Mr S. commenced by expatiating on the advantages society derived from the diffusion of scientific information, and expressed a warm attachment to the Institution. The lecture was of a highly interesting and useful character, and was delivered with that talent and perspicuity of manner which usually characterise that gentleman's lectures."—*Salisbury Journal*, Nov. 23. 1844.

Mesmerism and Phreno-Mesmerism.—Since our last publication, Mr Spencer T. Hall has paid two visits to Edinburgh, holding on both occasions several numerous and respectably attended *conversazioni*, in the large Waterloo Room. The same phenomena were exhibited as he had previously shewn at Glasgow (see *ante*, xvii. 414); of the genuineness of the chief of them, we find, after witnessing three exhibitions, no room for doubt. Such of the experiments as were performed on persons unknown to Mr Hall, were, of course, the most satisfactory to the spectators. What struck us forcibly, was the circumstance, that although in all phreno-mesmeric cases we had previously seen, the activity of the mental faculties ceased the moment the operator's finger was withdrawn from the head, this seldom if ever happened with Mr Hall's subjects, by whom the faculties continued to be displayed when contact no longer existed. Of his numerous "new organs," very little was said. We may add, that although his prelections were not in all respects suitable to the taste of a cultivated audience, and the style of his advertisements was little calculated to prepossess the public in his favour, Mr Hall has left a favourable impression of his moral and intellectual character, and zeal in the pursuit of truth. While here, he experimented in private as well as in public, and copious reports of the results may be seen in several Numbers of the *Supplement to the North British Advertiser*, and in the *Scotsman* of 16th October. We are glad to learn that he intends to go through a course of medical study.

Most of our readers have doubtless seen in the public journals Miss Martineau's account of her cure by Mesmerism, and of certain mesmeric phenomena which she has witnessed in a young woman with whom she is intimately acquainted. The *Athenæum* of 23d November and several subsequent Saturdays, contains her statement in full. Miss Martineau is well known to dislike Phrenology, and it is amusing to see how carefully she appears to avoid coming in contact with it. "I have said nothing," she remarks, "of Phrenology in connection with Mesmerism, though it is thought by those who understand both better than I do, that they are hardly separable. I have no other reason for speaking of Mesmerism by itself, than that I am not qualified to give any facts or opinions on phrenological phenomena induced by Mesmerism. The only fact I have witnessed (probably because we do not know how to look for evidence) in the course of our experiment was amusing enough, but too isolated to base any statement on. J. appeared one day to be thrown into a paroxysm of order, when that organ was the part mesmerised. She was almost in a frenzy of trouble that she could not make two pocket-handkerchiefs lie flat and measure the same size; and the passion with which she arranged every thing that lay awry, was such as is certainly never seen in any waking person. This fit of order was curious and striking as far as it went; and this is all I am at present qualified to say." (*Athenæum*, 7th Dec. 1844, p. 1118). Miss Martineau "*does not know how to look for evidence*;" yet she reports one piece of evidence, identical in its character with twenty others which might, without any deeper "knowledge," have been "looked for" in other parts of the head! But

we hope for better things. As to her cure—on which we heartily congratulate her,—there is no obvious ground for ascribing it to any other than the alleged cause; but medical men will of course be little impressed by her narrative, until the nature and history of the disease be made fully known. Her courage in coming forward as a champion of what she regards as a most valuable and important, though unpopular, branch of knowledge, is beyond all praise; and it may confidently be expected that in Britain more general and respectful attention will in future be paid to the subject than has hitherto been the case. “Let the *savans*,” says Miss Martineau, “really inquire, and combine to do so. Experiment is here, of course, the only means of knowledge. Instead of objecting to this, that, and the other theory (all, probably, being objectionable enough), let all thought of theory be put away till at least some store of varied facts is obtained under personal observation. Few individuals have the leisure, and the command of mesmerists and patients, necessary for a sound set of experiments. Though some see reason to believe that every human being has the power of exciting, and the susceptibility of receiving, mesmeric influence, and thus a course of experiments might seem easy enough, it is not so, any more than it is easy for us all to ascertain the composition of the atmosphere, because the air is all about us. Many and protracted conditions are necessary to a full and fair experiment, though brief and casual feats suffice to prove that ‘there is something in Mesmerism.’ Under the guidance of those who best understand the conditions—the brave pioneers in this vast re-discovery—let the process be begun, and let it be carried on till it is ascertained whether a sound theory can or cannot be obtained. To ask for such a theory in the first place, is an absurdity which could hardly be credited but for its commonness. ‘Tell me what Mesmerism *is* first, and next what it pretends to, and then I will attend to it,’ has been said to me, and is said to many others who, declaring Mesmerism to be true, have no theory as to its nature,—no conjecture as to the scope of its operations. Some ask this in ignorance, others as an evasion. Wise inquirers will not ask it at all till a vast preparatory work is achieved, which it is both unphilosophical and immoral to neglect. There are hospitals among us, where it may be ascertained whether insensibility to extreme pain can be produced. There are sufferers in every one’s neighbourhood, whose capability of recovery by Mesmerism may be tested. And in the course of such benevolent experiments, the ulterior phenomena of Mesmerism will doubtless occur, if they exist as commonly as is pretended. Let experience, carefully obtained, be wisely collected and philosophically communicated. If found untrue, Mesmerism may then be ‘exploded,’—which it can never be by mere ignorant scorn and levity. If true, the world will be so much the better.” In all this we heartily concur.

Miss Martineau denounces all public exhibitions of mesmeric phenomena, and thinks that “the greatest of all injuries done to Mesmerism, is by its itinerant advocates:” to her mind, the subject has a sacredness and solemnity, which such persons utterly desecrate. Now, this is a mere poetic fancy; and, that harm is necessarily done by public exhibitions, must be maintained on more solid grounds. Disgust and contempt are no doubt occasioned by ignorant and vulgar exhibitors; but to what other cause than public exhibitions can the present extensive interest in the subject be ascribed? And have not these exhibitions, and the experiments which they have stimulated private individuals to make, convinced multitudes who, in all probability, would have continued to sneer in ignorance? If the great body of “the learned” obstinately shut their eyes and ears against Mesmerism, surely it is better that men of a lower

grade should mount the platform, than that a matter of such importance should lapse into oblivion, or its elucidation and promulgation be materially retarded.

A "Society for the Investigation of Mesmerism" has lately been formed in London, to consist of an indefinite number of members; "but no lecturer or person making a gain of Mesmerism to be admissible." The Society to meet fortnightly from November to July, at the houses or chambers of the members alternately; the entertainment to be strictly limited to tea and coffee; the Society to assemble at eight, and to part not later than twelve. The funds to be devoted exclusively to the costs of experiments; and if not sufficient for the purpose, the deficiency to be supplied by an equal contribution from all the members. Careful minutes of the proceedings and experiments to be preserved, and the proceedings to be in the nature of a *conversazione*. The members to preside in succession at the meetings. Each member to be allowed to introduce *personally one* friend at each meeting; and the person at whose house the meeting is held to be privileged to introduce three friends. Persons desirous of joining the Society are requested to send their names and addresses to the publisher of *The Critic*, at the office, 29 Essex Street, and the secretary will communicate with them.

Mr Braid of Manchester has lately published some additional articles on Mesmerism (or Hypnotism) in the *Medical Times*. He concludes an account, inserted in that Journal on 30th November, p. 181, of some experiments which we have not room to discuss at present, by repeating the opinion that Mesmerism neither supports nor discountenances Phrenology.

London Phrenological Society.—Dr Elliotson has resigned as president of this Society; and Thomas Uwins, Esq. R.A., has been elected in his place. We are unable to report any other proceedings at present.

Sheffield Phrenological Society.—The second session of this Society concluded on 21st May 1844, when the annual meeting for hearing the report and electing officers was held in the Cutler's Hall, Mr Jehoiada Rhodes, Vice-President, in the chair. It appeared that the session was opened and concluded by two interesting lectures from Mr S. Eadon, A.M., one treating of "The Emotion of Beauty, Philosophically and Phrenologically considered;" the other, a "Critique on the Metaphysics of Imagination." During the interval, the operations of the Society were carried on by public lectures, two from Mr T. Adair of Sheffield, and five from Mr Thomas Beggs of Nottingham; as well as by five monthly papers read to the members and their friends only, by Messrs Derby, Mabson, Eadon, and Corsan, and after which much useful discussion ensued. The income, from various sources, had been L.29:6:8, and the outgoings L.27:8:8, leaving a balance of L.1, 18s. in hand. Altogether, judging both from the attendance at the lectures and the list of subscribers' names, the Society was in an advancing position. After passing various resolutions, and also a vote of thanks to the chairman, the meeting separated, electing as officers for the ensuing year,—*President*, Corden Thompson, Esq., M.D.; *Vice-Pres.*, G. C. Holland, Esq., M.D.; *Hon. Sec.*, Mr W. C. Corsan; *Finan. Sec.*, Mr T. Adair; *Treasurer*, Mr Henry Atkin; *Council*, Messrs Derby, Rhodes, Shuttleworth, Chadburn, Ellis, Wilkinson, Carson, Turner, Bartram, Scott, Roper, Mabson, and Wynn. On 27th November, Dr Corden Thompson delivered an excellent lecture before the Society, at the Assembly Rooms, in continuation of that reported in a previous part of this Number. He illus-

trated the decay of the mental powers which accompanies decay of the body in old age.

The British Association—Dr Carus's Craniology.—At the late meeting of the British Association in York, Dr Thurnam of that city directed the attention of the Medical Section to Dr Carus's "New System of Craniology on a Scientific Foundation," a system of which we have already more than once given our opinion. The report of the meeting states, that Dr Thurnam "adverted to the recognised importance of a knowledge of the true signification of the size and form of the different elements, or distinct divisions, of the brain or encephalon, in the study both of its healthy and abnormal manifestations; but expressed his opinion, that the 'Phrenology of Gall and Spurzheim had failed, as regards its details, in carrying a conviction of its truth to the minds of a great majority of those who, from their acquaintance with the anatomy of the brain and with general physiology, can be regarded as competent judges of the question. He contended, however, that the phrenology of these authors had been of great service in establishing some truths new to science, and in directing attention to the subject; but still thought that their phrenology may be regarded as holding very nearly the same relation to the true science, as in former days alchymy did to chemistry. He read several passages from Dr Carus's discourse in support of the principal inferences of that distinguished physiologist. 1st, That the encephalon (as shewn by the comparative anatomy of man and other mammalia) consists primarily of three pairs of ganglia or nervous centres—viz. 1, the *cerebral hemispheres*; 2, the *corpora bigemina*, or *optic lobes*; and, 3, the *cerebellum*. That, as shewn by the experiments of Flourens and others, the hemispheres of the cerebrum are connected with, and are indeed the organs of *perception*, the optic lobes of *general sensation* (feeling and the passions), and the cerebellum of the *will*, or voluntary power. 2d, That the development of these elements of the encephalon, and the consequent vigour of their connected functions, is, within certain limits and under certain qualifications, indicated by the corresponding development of the three regions or vertebræ of the cranium, within which these three pairs of nervous ganglia are contained as within their proper skeleton—viz., the *frontal*, the *parietal*, and the *occipital vertebræ*. And, 3d, That the development in different directions—viz., in height, width, and length, indicates different tendencies and qualities in these three great organs or divisions of the brain."

Wolverhampton.—At a meeting of the Literary and Philosophical Society, on 15th November, Mr W. R. Lowe concluded his series of papers on criminal jurisprudence, considered in reference to cerebral organization. The plea of insanity was the chief subject of the essay, and the unsoundness of the legal definitions of that state was pointed out. Madmen, it was shewn, are often perfectly conscious of right and wrong, without being able to refrain from illegal acts. "The question of 'hallucination,'" says the newspaper report, "was next considered, and though our law regards the proofs of insanity as incomplete unless delusions exist, and it can be shewn that the insane acts are the consequence of these delusions, it was argued and proved, that, in the great majority of cases of insanity, there is no delusion nor intellectual aberration whatever. This, indeed, is naturally to be expected from the fact, that the portion of brain devoted to the intellect is less than that which ministers to our passions and emotions, and, therefore, less likely to put on diseased action." We question the accuracy of the statement that in

general there is no delusion ; the fact being, that the affective faculties, when deranged, are apt grievously to mislead or delude the intellect, although the organs of the latter be in a healthy state. This is observed in a minor degree even in sane persons, while under the influence of resentment, jealousy, veneration, love, or other strong emotion. Mr Lowe concluded by shewing, that, under the system advocated in his former papers, the difficulties now besetting the subject would be removed, and the question of sanity or insanity would be one of no practical importance ; capital punishments and the principle of revenge being entirely abolished, every criminal, whether sane or insane, would be considered responsible to society to undergo the restraint and treatment necessary to effect a cure, or, if incurable, to protect society from any of his further misdeeds. " There was a full attendance of members," adds the report, " and the discussion was characterised by a remarkable unanimity and concurrence in the views advocated by the lecturer. A resolution was also unanimously passed that Mr Lowe and Mr Coleman form a sub-committee, to procure casts of the heads of any individuals who may die in this town and neighbourhood, and who have been remarkable for any peculiarities of talent or character, and that the expense of the same be defrayed out of the funds of the Society. It is expected that ere long an interesting local collection will be made." The example of the Wolverhampton Society ought to be universally followed by similar institutions. Were this the case, many valuable facts, which at present are suffered to perish, would be recorded for the benefit of science.

Mr E. J. Hytche.—A correspondent, subscribing " J. C. F.," mentions that Mr Hytche, who had very ably conducted the business of the Phrenological Class at the London Mechanics' Institution, as its secretary, for more than six years, resigned his office on 29th June last. In a letter dated 4th May 1844, Mr H. had previously announced as follows :—" After a connection with the Phrenological Class of six years' duration, circumstances imperatively demand that I should relinquish an office which other engagements render me inadequate to sustain. I cannot come to this decision without feeling some degree of pain ; and I cannot but feel grateful for the many benefits which I have derived from the class. Many have been the happy Saturday evenings which I have spent in the interchange of ideas ; much has passed in the class to develop the love of the good and the true ; and aspirations have been generated there which will colour my future life. Actuated by these reminiscences, I should have felt much pleasure in continuing to act as your secretary so long as you were satisfied with my services ; but other subjects at present occupy my attention, which, by clashing with phrenological studies, preclude that personal examination without which it is impossible to be anything but a copyist of other men—a position which no reflecting phrenologist can wish to assume. I have for some time past felt this to be the case. I have rarely been able to communicate anything novel, because I have been precluded by other pursuits from that meditative observation from which alone the new can be evolved. Every sense of duty, therefore, conspires to compel my resignation." On the day of the quarterly meeting, there was a very full attendance, both of members of the class, and others belonging to the institution who had a personal friendship for Mr Hytche. After the ordinary business was completed, and the usual thanks given to the officers for the performance of their duties during the past quarter, a second vote of thanks to Mr Hytche, for his long and unremitting services of six years, was pro-

posed, and carried unanimously, many speeches being made on the occasion, and some by members that rarely said more than half-a-dozen words at the usual meetings. This was called forth as much by the personal friendship the members of the class have for Mr Hytche, as by his long and worthy services. The members of the class then presented him with a copy of "Combe's System," elegantly bound, as a memento, and as a grateful acknowledgment of their obligations to him. This testimonial, though of no great pecuniary value, affected him very much, as it was unexpected; and for some minutes he was unable to proceed in returning thanks to the class.

The late Dr Seiler of Dresden.—The following communication respecting this distinguished individual appeared in the sixth number of the German Phrenological Journal (1st June 1844):—

"Burkhard Wilhelm Seiler, born at Erlangen, on the 11th April 1779, died, a few months ago, at Freyberg, near Dresden. His merits as an author, teacher, and practising physician, are sufficiently known; but his name deserves to be recorded with honour in our pages, on account of his having, for a long series of years, devoted much of his attention and activity to the doctrine of Gall.

"Dr Seiler, during his residence in Vienna, was a zealous student under Dr Gall, and was so deeply impressed with the truth of his discoveries, that he never afterwards allowed them to slip entirely out of his view. Dr Tobias, Professor of Anatomy in the *Collegio Medico-Chirurgico*, in Dresden, was a contemporary, an enthusiastic scholar, and fellow-labourer of Dr Gall, and had made Phrenology the chief object of his scientific exertions. Dr Seiler succeeded him in his chair, and purchased from his representatives, for the anatomical cabinet of the Academy, an extensive collection of human skulls, and for himself a collection of skulls of the inferior animals, on which an inconceivable amount of labour had been expended. Dr Seiler recognised in Comparative Anatomy a leading star towards the development of Human Physiology and medical science, then only in the grey twilight of their dawn; and, as such, recommended it earnestly to the notice of his students. Before the winter 1833-4, when Mr Noel formed his acquaintance, there was not a single plaster cast in the Medico-Chirurgical Academy's cabinet. From that time, Dr Seiler carefully collected every specimen that came within his reach, as director of the Anatomical Institution. The skulls of decapitated criminals, and of those who died in the state prison, and whose bodies were delivered to the Anatomical Theatre, were preserved, and as correct an account of the lives and characters of the individuals as could be obtained, was attached to them. The skulls of remarkable suicides, also, with the necessary evidence of their qualities, or casts, or at least measurements of these, were added to this collection. He rarely omitted to take casts of the skulls of distinguished men who died in Dresden. He increased the phrenological collection thus begun, by a great number of national skulls and casts of eminent persons, acquired through purchase or barter, and completed it by the purchase of a considerable collection of plaster casts from Dumoutier in Paris, and O'Neil in Edinburgh. This is the only collection of the kind in Germany; but it is so extensive that it may safely be brought into comparison with the richest of the foreign phrenological museums.

"Dr Seiler had seriously contemplated, several years before his death, delivering a course of phrenological lectures in Dresden. His numerous official duties, however, and, latterly, the failure of his health, prevented him from carrying this design into execution."

Hints as to the Making of Plaster-Casts.—With reference to an article on plaster casts in our 80th Number, Mr William Bally of Manchester, well known as a skilful artist in this department, desires us to protest strongly against the use of soap for smoothing down the hair, as recommended by Mr Butler of London, in directions which we quoted from the *Zoist*. When soap is employed, there is extreme difficulty in cleaning the hair after the operation. Oil is greatly preferable, and the application of a very small quantity of it is enough. Mr Bally recommends the employment of a mixture of equal amounts of baked and boiled plaster, with the view of preventing, as much as possible, the superiority of size of the cast over that of the original. This desirable object is farther promoted by taking off the mould in very few pieces—for example, in three. The hair need not be cut uniformly short; if alternate locks be entirely cut off, the others may remain of moderate length. No tube is inserted by Mr Bally in the nostrils of persons subjected to the operation; a hole left in the mould allows them to breathe perfectly. He agrees with Mr Hytche in denouncing, as useless, casts which have been moulded from copies of copies. Happening to be in Manchester lately, we had the pleasure of witnessing the operation of casting a head, as performed by Mr Bally. The person is made to recline on his back, at an angle of about 35 degrees, upon a seat ingeniously adapted to the purpose. The hair and face being anointed with a little pure scented oil, the plaster is laid carefully upon the nose, mouth, eyes, and forehead, in such a way as to avoid distorting the features; and this being *set*, the back of the head is pressed into a flat dish containing plaster, where it continues to recline as on a pillow. The plaster is then applied to the parts of the head still uncovered, and soon afterwards the mould is hard enough to be removed in three pieces, one of which, covering the occiput, is bounded anteriorly by a vertical section immediately behind the ears; and the other two, which cover the rest of the head, are divided from each other by pulling up a strong silken thread, previously so disposed upon the face as to make the line of separation fall on one side of the nose. When the operation that we witnessed was finished, the gentleman whose head was cast declared that he had been as comfortable as possible all the time; and he had no difficulty in sufficiently cleansing his hair with a comb and towel. We greatly admired the skill and quickness with which Mr Bally performed the operation.

Instance of Incongruity in a description of Bodily and Mental Character.—In our Number for April 1844, Mr G. Combe adverted to several instances of discrepancies between the head and mental character, introduced into works of art which he had examined in Rome. How often do phrenologists observe similar errors committed by authors in their descriptions of persons! One example occurs in "*Reminiscences of Dublin College Life*, No. III.," in *Tait's Magazine* for January last. The following description is excellent in most of its features, but its effect is injured by its inconsistency with itself and with nature. "The most finished talker of 'true no-meaning,' in that (the Historical) or any other Society, was Carrol Watson, a real Tipperary boy, who possessed all the exterior qualities of an orator in the utmost perfection. His person was well-proportioned and athletic; his face, handsome and sufficiently intelligent, could express all the fiercer passions with high dramatic effect. His eyes dark, full, and flashing, seemed to look quite through the thoughts alike of friend and foe. His hair, of a glossy black, curled naturally about his temples, and set off an extremely fine forehead. A more

showy specimen, in short, of a vigorous young Irishman of five-and-twenty, was not to be seen. Were it not for an unpleasant air of confidence and swagger, he might have been pronounced as gentleman-like as he was good-looking; but those are essential vulgarities, which no personal *agrémens* can neutralize. His action was moreover free and graceful, and his voice as loud and clear as a market-bell. But all this was the mask in the fable; there was *no brain behind it*. *He had a complete machinery for speaking, but nothing to speak*. Yet he rattled away. Words came at will; not very choice words, to be sure; but he threw them together somehow, and they sounded well, as they rolled out, in an unbroken stream, from his lips." An election is mentioned, "which afforded him an opportunity of developing the faculty of *saying nothing ad infinitum*, in which he stood for ever after unrivalled, even by the great Lord Castlereagh."—P. 26.

The remark that Carrol Watson *had a complete machinery for speaking* (in other words, an active temperament, large organs of Language, a vigorous chest, and a tongue), *but nothing to speak* (the result of an extreme deficiency of all the higher intellectual organs), is extremely felicitous and descriptive; but how could such a character have a face sufficiently intelligent, and "eyes that seemed to look quite through the thoughts alike of friend and foe," the accompaniments of intellect alone? Or how could he have "*an extremely fine forehead*," and "*no brain*?" These incongruities are as grotesque as if the author had said that Carrol Watson had a finely-expanded chest, but no lungs; and that he was as swift as the roe, but incapable of walking. A small portion of physiological knowledge would have prevented such errors of description.

Brain of Dr Abercrombie.—According to the *Lancet*, a *post-mortem* examination of the head of this eminent physician, revealed the facts that "the brain was very large, weighing 64 ounces, but healthy in structure throughout."

Errata in last Volume.—P. 369, line 2, for *Jesuits*, read *jurists*. P. 407, l. 6, for *Medico-Chirurgical Review*, read *British and Foreign Medical Review*. P. 417, l. 35, the paragraph should begin thus—"The Rev. Mr De Smet, a missionary who has spent some years among the Indians on the west side of the Rocky Mountains, in a letter quoted by Professor Horner," &c.

Books Received.—*Vestiges of the Natural History of Creation*. London: J. Churchill. Post 8vo, pp. 390.—*The British and Foreign Medical Review*, Oct. 1844.—*The Medico-Chirurgical Review*, October 1844.—*The Zoist*, Oct. 1844.—*The Phrenological Almanac for 1845* (New York).—*The Phrenological Almanac for 1845* (Glasgow).—*Religion, Natural and Revealed; or, The Natural Theology and Moral Bearings of Phrenology and Physiology*. By O. S. Fowler. New York, 1844. 8vo, pp. 174.—*The American Phrenological Journal*, from September 1843 to June 1844.—*Education and Self-improvement, founded on Physiology and Phrenology*. By O. S. Fowler. 8vo, pp. 252 and 102. 2d edition. New York, 1844.—*Zeitschrift für Phrenologie*, No. VI. Heidelberg, 1844.—*Umriss der Phrenologie*, von Dr Ed. Hirschfeld. Bremen, 1844. 8vo, pp. 105.—*Vital Magnetism; a Remedy*. By the Rev. Thomas Pyne, Incumbent of Hook, Surrey. London: S. Highley, 1844. 18mo, pp. 80.—*The Duality of the Mind proved by the Structure, Functions, and Diseases of the Brain, and by the Phenomena of Mental Derangement; and shewn to be essential to Moral Responsibility*. By A. L. Wigan, M.D. London: Longman & Co., 1844. 8vo,

pp. 459.—Studi Frenologici di Pietro Molossi: Analisi Critica dell'Opera del Sig. Fr. Lèlut intitolata "Rejet de l'Organologie Phrénologique de Gall et de ses successeurs," di Pietro Molossi. Continuazione della Parte Polemica. Milano, 1844. 8vo, pp. 310.—The Phrenological Almanac for 1842-3-4-5. 8vo, boards.

Newspapers Received.—Glasgow Examiner, Oct. 5.—Leamington Spa Courier, Oct. 5; Dec. 14.—Cork Southern Reporter, October 8, 12; November 7.—Sheffield Independent, October 12; November 2, 9, 30.—Derby Reporter, October 25, November 1.—Wolverhampton Chronicle, November 20.—The New Moon, or Crichton Royal Institution Literary Register, No. 1, December 3.—Sligo Journal, December 6.—Sligo Champion, November 16.—Salisbury Journal, November 23.—Manchester Guardian, Dec. 21.

To Correspondents.—The communications of Dr Kilgour and Mr Atkinson are unavoidably deferred.—C. misapprehends the scope of Mr Combe's Letter on Copyright, which expressly states, that the right of property, not in *ideas*, but only in *language*, is argued for.—We thank "A Lady" for her communication.—The article on Newton and Bacon shall be inserted.—Dr Michael Castle writes:—"I was sorry to perceive that the gentleman who wrote the notice of my work on Kerner for your Journal [vol. xvii. p. 296], had not only attributed to me ideas which I have never professed, but had also fallen into the same error committed by Dr Scheve, viz. in attributing to me an enthusiasm for the school of the communists,—a school with which I have absolutely nothing to do. I have never declared that the lower feelings should be permitted an unlimited sway; but only that the natural action of a feeling produces evil consequences, *when not properly directed*,—in fact, that the aim of the phrenologist should be to *direct*, not to *subdue*, the natural action of a faculty. If you should think proper, in your next Journal, to correct this misstatement, you would oblige me." We insert this explanation with pleasure; but must add, that the reviewer of Dr Castle's pamphlet still maintains the accuracy of the representation which he gave of its contents, and refers for proof to its 57th and 58th pages. Dr Castle being unacquainted with German, the translator of his pamphlet into that language may have failed to give an accurate statement of his opinions. That their nature, *as expressed in German*, has not been misrepresented, is likely from the fact, that Dr Scheve and the writer in our Journal, both of whom are Germans, concur in understanding Dr Castle alike. In saying that the intellectual faculties and moral sentiments should always control the propensities, the reviewer did not mean to imply that Dr Castle teaches the opposite doctrine.

Communications for the Editor (prepaid) may be addressed to Mr ROBERT COX, 25 Rutland Street, Edinburgh. Books or parcels, too heavy for the post, may be left (free of expense) with the London publishers, Messrs Simpkin, Marshall, & Co., Stationers' Hall Court.—Articles intended for the next following Number must always be with the Editor *six weeks before the day of publication*. Communications for the section of "INTELLIGENCE," and also Advertisements, should be in hand at least a fortnight before the same day. Charges for advertising:—Eight lines, 6s.; twelve lines, 7s. 6d.; every additional line, 6d.; half a page, 14s.; a whole page, 25s. Advertisements may be sent to the publishers in Edinburgh or London.

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APRIL, 1845.

NEW SERIES.—No. XXX.

I. MISCELLANEOUS PAPERS.

- I. *Penal Colonies*—"The Management of Prisoners in the Australian Colonies. By Captain Maconochie, R.N., K.H., late Superintendent of Norfolk Island."

In vol. viii., p. 109, of this Journal (1834), we published a phrenological description of the prevalent forms of the brain in individuals liable to criminal tendencies, and discussed, at considerable length, the subject of criminal legislation. On that occasion we remarked, "If we did not know the slow adoption of all scientific discoveries, and that, the more momentous in their consequences, they are the more reluctantly admitted to be true, and the longer of being practically acted on, we should feel surprise that these facts should have been frequently and positively announced, and nevertheless, that men of great talents, and unquestionable honesty and philanthropy, should continue to write on criminal legislation, without once adverting to their existence any more than if they were all a dream. Indeed, in consequence of these individuals having neglected to observe the facts, they are to *them* only imaginative speculations. There is this consolation, however, for the humble advocates of Nature and her laws,—that the most splendid talents will never attain sound and permanent conclusions, while they neglect the truths which she presents to their observation. They may rear whatever speculations they please on a basis of their own formation, but time and experience will destroy them. On

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the other hand, conclusions legitimately deduced from an accurate survey of nature, although despised for generations, are nevertheless true, and capable at all times of being rendered practical. We therefore calmly proceed in our humble vocation, of expounding, for the twentieth or thirtieth time, the real theory of crime, in the hope that sooner or later it will be deemed worthy of consideration." The facts which we shall have occasion to state in the present article, will shew to what extent these remarks have been supported by the experience of the eleven years which have elapsed since they were published.

Under the existing system of criminal legislation, every man is held responsible for his actions, who, in the phraseology of lawyers, can distinguish between right and wrong; and this responsibility consists in being subjected to a certain extent of punishment—in other words, mental and physical suffering—proportioned to the magnitude of the offence which he has committed. Although even in the metaphysical schools of philosophy it is generally admitted, that the impulsive, and also the intellectual faculties, are distinct in their characteristics, and not existing in fixed and definite proportions to each other in every individual, yet this fact, and the consequences which flow from it, have been and are disregarded by our criminal legislators. An individual may be born with so strong an instinct of acquisitiveness and such weak moral and intellectual powers, that, like a fox on a common, he may be actually impelled by his nature to appropriate objects suited to gratify his propensity, regardless of the preferable rights of others; or he may be destructive or deceptive in his tendencies—prompted by strong internal impulse to take away life, or to commit fraud; but the law takes no cognizance of his mental constitution. He may be grossly ignorant; he may be undergoing the pangs of starvation; or he may be surrounded by the temptations presented by intoxicating liquors and a social atmosphere of ignorance and profligacy; still the law takes no account of such things. It inquires only whether he possesses so much intellect as to know that it has declared stealing, killing, fire-raising, fraud, deception, and hundreds of other acts, to be *wrong*. If he is not purely idiotic or raving mad, he may be in any of the unfortunate conditions now mentioned, and yet know this fact. And this is enough for the law. It, then, by a fiction of its own, and often in opposition to the most glaring indications, assumes him to be a free and responsible being, and deals out its punishment, in other words its *vengeance*, upon him for having disregarded its dictates.

It makes no inquiry into the *effects* of its inflictions on his mind. Strong in its own *fiction* that he *is* a free, moral, and responsible being, it aims at no object except deterring its subjects from actions injurious to Society, and assumes that *suffering* is the best or only means necessary to accomplish this end ; and punish him it does accordingly.

The chief *forms* in which the law punishes, are confinement in prisons (until very lately in idleness and amidst vicious associates), and, in more aggravated cases, transportation to a penal colony. The following example of the dispositions or tendencies of a female offender and her husband, and of the effects of imprisonment on their minds, presents itself accidentally as we are writing. It appeared in the *London Weekly Chronicle* of 26th January 1845, and is only one of a thousand similar cases which could easily be collected from the records of the prisons of the United Kingdom.

“ HISTORY OF A COINER.—A woman, named Mulhern, alias Lockwood, was committed in Lancaster last week, on a charge of coining and uttering counterfeit coin ; and we now proceed to give some particulars of her truly eventful history, with which Mr Powell, the solicitor to the Mint, has obligingly furnished us.

“ The first that is known of her is as the wife of a soldier serving under Sir John Moore in Spain, and whom she ‘ followed to the field ’—trudging along with the army and its gallant leader through its long and remarkable retreat, till the battle of Corunna. After this, she was with the army under ‘ the Duke ’ in Portugal, and during the whole of the Peninsular war, whether merely as a camp-follower or with her husband is not known ; but he is supposed to have been killed in some of the many engagements that took place, and she to have consoled herself with another, if not many more. In one engagement with the enemy, the serjeant-major of the regiment she followed was killed by a shot ; on which (while, it is imagined, the engagement still continued) she contrived to get at the body, and rifle the dead man’s ‘ kit ’ of its contents. Among these were his marriage and other certificates, which she carefully concealed and preserved for after use. On returning home she passed herself off as the widow of this serjeant-major, in order to obtain a pension ; and afterwards, on a nurse’s place in Chelsea Hospital becoming vacant, she applied for, and obtained it, also as the serjeant-major’s widow ; having all the necessary documents, she was enabled to answer every question, and her identity was never doubted. But, when she had been comfortably located here for some time, the real widow came home ! Her application for a pension, its denial on the ground that the widow was already provided for, and the *real* widow’s reiterated assertions that *she* was the widow, caused an investigation by the late Sir Charles Grant. The result was, that Biddy was turned adrift on the ‘ wide world,’ and was lost sight of for several years. Her first re-appearance was in the character of a coiner, as which she was tried and convicted in 1828, and sentenced to a year’s imprisonment. In 1834 she was again tried ; but this time under the name of Lockwood, and in company with her second husband, whose real name, however, was

Stafford, and who was a very skilful mason by trade. He was convicted, and she was then acquitted as being his wife, and supposed to be acting under his direction. In 1836 she was convicted at Aylesbury for coining, and she then said she was fifty-five years of age. She was again tried for the same offence at Warwick in 1838, but acquitted, owing to the insufficiency of evidence; and in July of the same year she was again tried, and this time in connection with a woman named Eliza Perceval, the offence being the same. Lockwood (prisoner) got eighteen months' imprisonment, and her companion twelve months. From that time till the present apprehension of Mrs Mulhern alias Lockwood, &c., Mr Powell had almost entirely lost sight of her; sometimes he thought he recognised her business talent in the different cases forwarded to him, but was not able to follow out the clue. In the answers she now gave to the questions contained in the 'Description Paper,' prisoner had in almost every case given false statements, not wishing, doubtless, to renew her acquaintance with the Mint solicitor; and when confronted with him, she stoutly denied all previous knowledge of Mr Powell, till he mentioned one or two 'passages' in her life, when she said, 'Ah! ——— told you that tale!'

"In 1821, Lockwood (her husband) was convicted at the Surrey assizes of coining, &c., and sentenced to one year's imprisonment. In 1833 he was convicted at Warwick, and sentenced to six months' imprisonment. The following year he was tried and convicted at Stafford, and sent to gaol for one year. For the next three years little or nothing was heard of him; but in 1838 he was tried at Warwick, where he got three months' imprisonment; and in January 1839, he was tried at Gloucester, and sentenced to a year's imprisonment. Lastly, he was apprehended at Abingdon in the following, or the year after that, with a woman of the name of Harriet Thompson—whom he had taken to supply the place of his wife on her being sent to prison for eighteen months; and on the 25th of January he was transported for life, and she (Thompson) was imprisoned for two years. Ann Lockwood, if we recollect aright, was not actually aware of her husband's fate till she saw Mr Powell in Leicester gaol. At the expiration of her term a subscription was raised to enable the woman Thompson to follow her 'husband' to Sydney, and she arrived there safely. In October last the governor of Abingdon gaol had received a letter from her, stating that 'James' (Lockwood or Thompson) was regularly employed by the chief builders at Sydney, and at good wages; while she had also obtained profitable employment. He, it seems, is very clever as a workman in Gothic architecture, and at cutting out grotesque heads and other ornaments for churches."

The *Chronicle*, which reports this case, adds, "The above sketch of the strange lives of two coiners furnishes a striking commentary on the utter inutility of mere punishment, as deterring from the future commission of crime; and should the present or any future solicitor to the Mint ever make known to the world the 'curiosities of his legal experience,' that world would be astonished to find with what utter recklessness these sons and daughters of crime have looked upon the violent and ignominious death of their most intimate companion."

If the existence and character of a cause is to be judged

of from its effects, no person capable of reasoning can doubt, that although this husband and wife were both capable of distinguishing intellectually between right and wrong, there was in their minds some strong tendency to wrong (although perceived to be wrong), which all the religious, moral, and intellectual training that they had received,—all the influence of public opinion that had reached them,—and all the terrors of the law which they had either heard of or experienced,—had failed to eradicate or control. From these premises, unbiassed reason would conclude that they were *not* free moral agents, but *moral patients*, whose cases needed restraint and treatment for *cure*, much more than *punishment* in the form of vengeance or retribution. We repeat that the assumption of the law that they *are* free moral agents, is purely a *fiction*, directly contradicted by facts; and in our opinion, those personages who, in enacting our laws, create this fiction and persist in acting upon it in the face of positive demonstration of its mischievous effects, are responsible to God and man for all its painful consequences. The following description of the penal colonies in Australia shews what the consequences of the second form of punishment—transportation—really are.

The communication on *The Management of Prisoners in the Australian Colonies*, by Captain Maconochie, named in the title of this article, is printed, but not published; and having (by the kindness of its author) obtained a copy, and ascertained that he does not object to our laying its contents before the public, we proceed to state its substance to our readers. A more important, interesting, and melancholy document we have rarely perused.

In vol. viii. of this Journal (March 1834), p. 488, a sketch was given of a system of prison discipline, proposed by Mr Secretary Livingston of Washington, which was there commended as by far the most enlightened that had been propounded. The following scheme, now advocated by Captain Maconochie, is a practical embodiment of Mr Livingston's views and of some of the suggestions made in that article, and an adaptation of them to the state of our penal colonies. It gives us much pleasure to perceive that extensive observation and experience have led Captain Maconochie to practical conclusions identical with those which were so strongly recommended on that occasion as sound, because they were in harmony with the constitution of the criminal mind.

Captain M. remarks, that the attention of the British Government and of the public has of late years been much directed to this subject, and many changes have been introduced into the arrangements for the management of con-

victs in the penal colonies ; but these have related chiefly to details in the administration, leaving the *principles* very slightly, if at all, improved. Indeed, the inevitable operation of the prevailing principles on the minds of the convicts has not yet been sufficiently understood. Only a deeply-interested eye-witness (says Captain M.) can thoroughly appreciate their effects ; and only a practised hand can successfully develope better principles on which a new system may be advantageously founded. Captain M., besides being conversant with Phrenology, has enjoyed the advantage of eight years' study and observation in the penal colonies, during the last four of which he had the principal charge of the prisoners on Norfolk Island. He possesses, therefore, high qualifications for portraying faithfully things as they are, and for suggesting how they may be improved.

He describes the errors of the existing system to be the following :—

1. "It measures its sentences by time, with little or no reference to conduct during that time." The young, the single, the careless, reckless, and profligate, care little about the loss of time ; while the middle-aged, the married, the provident, and the ambitious, feel it strongly, and would make great exertions to shorten the duration of their sentences, if means were afforded by good conduct to do so. At present the constant thought, even of the best men, is how their time may be whiled away with the least possible discomfort.

2. It errs in "punishing by compulsory labour, in the due performance of which the men have no individual interest." This gives a disgust to labour, and impairs all industrious tendencies in the convict ; it cultivates every original and acquired capacity for deceit or evasion ; and in extreme cases leads even to mutilating the person to avoid work. Slovenly and imperfect execution of work is another consequence ; and even the good men *dare not* resist the *esprit de corps* of the mass, which is constantly, through its interests, directed to idleness. A man who should "furnish in his own person a measure by which to estimate the exertions of others, might reasonably fear injury, whether he actually sustained it or not."

Through these two circumstances, "a vast school of evasion and deceit, of craving after sensual indulgence, and snatching at it when it offers, however criminal and even disgusting sometimes its character, is formed in the penal colonies."

3. Another error is, "the allowance to all of fixed rations of food and clothing, whether labour and good conduct are

rendered for them or not." Their employments are generally irksome to them, and often studiously (although most unwisely) made so by the principles of the system. Here, then, through labour that is irksome and food supplied irrespective of performing it, is a premium offered to idleness; and as idleness can be reached only by deceit and imposition on their taskmasters, a fresh stimulus is given to the practice of falsehood. Their occasional *success* in deception encourages them, while their occasional *detection* and punishment irritate and stimulate them, like gamblers, "to try again."

4. "Another error of the system is of a precisely opposite character to this, yet it is not less injurious." Certain periods are fixed when prisoners may apply for specific indulgences; "but their applications may be granted or refused at will; and when granted, the results may, in most cases, be also cancelled at will." The officers employed are greatly attached to this part of the system, as investing them with what they regard to be a salutary influence, authority, and control over the convicts. Captain M. views its effects very differently. "Placed (says he) as little gods in the communities in which they move, they become tyrannical and capricious almost of necessity." "By flattering their weaknesses (and no man is without some), it impairs insensibly the better parts of their character, and brings into prominence the worse. I say all this (continues Captain M.) the more frankly, because I include myself among those spoken of;—and during my four years' command at Norfolk Island, nothing was more continually before me than the progressive deterioration to which I was thus subjected." The evil effects on the men are equally apparent. "Every feeling of self-dependence is speedily lost in a universal relying on favour, hypocrisy, and fawning, playing on the weaknesses of others, and not studying by patient diligence and integrity to deserve and reap their due rewards."

5. Under the existing system, the men are almost universally indecently lodged. "They are now, for the most part, accumulated in rooms containing from fifty to one hundred and fifty each, usually without light, and without other convenience than night tubs for the relief of the wants of nature." The injurious effects are most deplorable "Personal reserve and delicacy are speedily banished; the most disgusting scenes become familiar;"—we cannot proceed with the quotation: the picture is completed in these words—all are "reduced to a common low level; and the actual level is, on this point, low almost beyond conception;

it is exhibited in their language, habits, feelings—every thing!” Better accommodation, says Captain M., would not now stop this monstrous evil. “It is interwoven with the whole state of degradation to which these men are subjected, and can be removed only with it.” A partial remedy would be found no remedy at all.

6. The deep degradation of the convicts, consequent on all these circumstances, is the next evil of the present system. Captain Maconochie gives a view of their moral state which is truly appalling. Their low condition prompts the officers to overlook all their interests, and in the administration of justice among them to treat them with “culpable negligence and severity;” to disregard their natural feelings, and to subject them “to much harsh and contumelious language.” The individual being thus degraded in the eyes of others, speedily loses his own self-respect also, yields without restraint to present temptation, and falls into a state of “almost inconceivable wickedness.” Despairing of earning the approbation of the free community with which he is associated, “he naturally falls back on his own class, and the more prizes its sympathy and approval instead. In this manner is generated a strong and even tyrannical public opinion among the convicts themselves,” a school in which “courage, patience, daring, self-sacrifice, and fidelity,” are often elicited, but “uniformly directed against the government and the interests of free society.” The approbation which they obtain “confirms the tendency to reckless daring,” a quality which, “more or less, characterises all prisoners, and without which they would probably have been scared by the first threatenings of the law, and would have escaped its toils.” The concluding remark on this point is of the highest practical importance: it is as follows—“As a feature in the criminal character, this daring is not, I think, sufficiently adverted to by those who advocate the attempt to deter from crime by severe punishments. *Temper under its influence feel themselves only challenged, both in their own eyes and those of their companions, by the recurrence of these.*” However strange it may appear to those unacquainted with the subject, yet “*crime thrives on severe examples,*” and “most certainly in direct competition with them.”

7. The present system operates *de facto* as if it had been expressly contrived to accomplish the moral ruin of the men. The individual is condemned for seven, fourteen, twenty-one years, or a whole lifetime, to the influence of these circumstances, and *no moral or religious conduct* can extricate him from them. The “good conduct” for which a pardon may

be obtained, consists in "shooting a bush-ranger, betraying a comrade, or otherwise, with or without risk, promoting what is considered an adequate government object!" They are "among the worst men who are so benefited; and there is *no example that I am aware of, of the milder and more domestic virtues being similarly rewarded.* Nor is this a fault in the administration of the system, but is essential to itself!" The results are next stated. "It is astonishing how rapid is the progress of deterioration. I have seen fine promising young men, and comparatively innocent, in a few months pass through every degree of wickedness; and, in fact, I have observed that it is the young, and otherwise the most interesting, who generally fall both fastest and farthest."—"It is notorious in the penal colonies that the new arrivals are much better generally than the older prisoners, though they speedily acquire all their evil ways; but such an ascendancy is given to all that is evil in the management to which after their arrival they are subjected, such fetters are thrown by it over all good, such scope is afforded for the development of bad passions, so narrow is the sphere for every virtue, except submissiveness, not in itself a virtue at all, but rather a weakness, preparing for evil influence as much or more than for good direction," that "any set of men in the world would be ruined," and "even the most virtuous and intelligent in the kingdom would speedily be destroyed by it." "I willingly admit that an aspect of external decency is maintained by the discipline imposed, which veils much of the real effect from superficial observation; *but the facts here stated are indisputable.*"

Nor does the evil end with the prisoners; for in society the ruin of one class necessarily involves the deep injury of every other. "Wild beasts as these men are made, weak and wicked as they become, they are the labourers in the penal colonies, and rise, many of them, to be small tenants and proprietors in them. They carry with them to their new sphere the vices of their old condition. They enter the market prepared to take any advantage that may offer; and while they thus lie, steal, rob, or defraud, as it may happen, it is too often thought fair by others to meet them with their own weapons, and 'diamond cut diamond' becomes thus a general rule. Meanwhile, the harder and more enterprising of them (generally the worst, and in such cases no language can over-rate their wickedness) effect their escape, or otherwise leave the colonies, and spread over the Pacific." Everywhere "they rob, they murder, they steal, they commit every excess that comes in their way, they catch at every passing sensual enjoyment, they gratify every brutal appetite, they

revenge their quarrel with their native country (their just quarrel I will venture confidently to call it), by trampling where they have the power on every feeling of humanity and every interest of civilisation !”

No words can add strength to the terrible features of this representation. Society owes a debt of gratitude to Captain Maconochie for having lifted up the veil and showed us the monstrous evil in all its hideousness and horrors.

Such, then, are the effects, at home and abroad, of the prevailing principles of British criminal legislation and prison discipline. A few words will suffice to recapitulate, for the benefit of readers to whom the subject is not already familiar, the views entertained by phrenologists.

In some individuals the organs of the propensities, in point of relative proportion, bear the ascendancy over those of the moral and intellectual faculties ; in other words, their heads are low, broad, contracted in front, and amply developed posteriorly. Men thus constituted, if their brains are active, are impatient to obtain gratification of their passions ; they feel few and feeble checks from conscience or religion, and are greatly deficient in intellectual capacity, and in the restraining and directing power which intellect, when largely developed, confers. Placed amidst the temptations of society, they rush to crime, as the directest mode of attaining pleasure.

This constitution of brain and mind is to them natural ; it is their misfortune, not their fault ; and their actions are the results of that constitution, and of their external circumstances, combined. To save them and society from these results, either their natural dispositions or their circumstances, or both, must be changed ; and this must be done *for* them by others, because they have not the power to do so themselves. Society has a great command over external circumstances, and by operating through these, it may greatly improve their dispositions and actions.

In another class of individuals, the organs of the animal propensities, those of the moral sentiments, and those of the intellectual powers, are developed in those equal proportions which place those classes of faculties nearly in equilibrium. Such persons are impelled naturally by strong passions, but they possess also strong powers of moral and religious emotion, and of intellectual perception. Their character is determined in a very great degree by the circumstances in which they are placed.

The third class is that in which the moral and intellectual organs predominate over those of the propensities. Here

the head is high in proportion to its breadth, has the top and front large and well-rounded, and is not immoderately large behind. Individuals thus constituted have naturally strong feelings of moral and religious obligation, and vigorous intellectual perceptions, while the solicitations of their animal propensities are relatively moderate.

Judging from observations made in society, we should say that the third class (the highest in endowment) abounds extensively, that the second class also is numerous, while the third class forms a very small minority of the British population. Our lawgivers, judges, and magistrates, belong, many of them, to the highest class; and those of them who belong to the second, have enjoyed the advantages of intellectual education and moral training, while their wealth and station in society remove from them many temptations, which in a state of ignorance and poverty might have reached them, and subverted their strongest moral resolutions.

These two classes have made laws for the whole community, in the implicit belief that *all* men are, or by an act of their own wills may become, what nature and favourable circumstances have made *them*, namely, intelligent moral agents; and as they feel that, with their endowments and in their circumstances, *they* would be justly punishable for robbing, stealing, forging, coining, killing, and so forth, they proceed at once to enact severe punishments against all who commit offences, entirely irrespective of any natural deficiencies and unfavourable conditions, which may attach to individuals in the mass. This error of judgment lies at the root of all the erroneous legislation and unwise treatment of the offending members of society, and it is on this account that we have again and again entered in detail into the subject; for although these truths are as apparent as the noontide sun to phrenologists, it is certain that they have not yet reached the understandings of our legislators. We appeal to the forms of these heads, because, however obstinately men may avert their eyes for a season from such evidence, we cannot doubt, (just because it is visible and tangible, and an institution of the Creator,) that this is the only *true and solid*, and, therefore, the only *clear and practical basis*, on which to rest projects for improvement that will be successful. While it continues to be neglected, we shall faithfully record the results, and leave to those who choose to disregard the institutions of Providence, the whole merits of their own achievements.

In Mr Sampson's work on Criminal Jurisprudence considered in relation to Mental Organization (reviewed in our 15th volume, p. 63.), are discussed the principles according

to which the law should deal with convicted offenders. He considers infringement of the criminal law (whether arising from natural deficiencies or unfavourable proportion of brain—from want of moral and intellectual training—from strong external temptations—or from two or all of these causes combined), to be a symptom of the offender's incapacity for enjoying freedom in general society; and recommends that he should be secluded and treated with a view to the removal, if possible, of the causes which led to his offences. The suffering necessarily connected with this treatment (namely, physical restraint, the withdrawing of accustomed vicious enjoyment, and the enforcement of sober, regular, and industrious habits, on a man of dissipated, impulsive, unsteady, and idle dispositions), and the self-reproach for past misconduct, consequent on an improved moral, religious, and intellectual condition, are the *natural*, and, because natural, the appropriate, the efficacious, and therefore the *only* penalties, which man is entitled to inflict, or can beneficially inflict, for a brother's offences. The same principles have been expounded in many phrenological works, from the date of an "Essay on the Constitution of Man," by the writer of this article (printed in 1827,) to the present time.* For more than half a century, similar views, more or less founded on common psychological observations, have been advocated also by a host of writers who have suggested important improvements in prison discipline; but still the master errors and their revolting consequences continue to exist.

In vol. xv. p. 22 of this Journal (July 1842), we gave an account of Norfolk Island, to which the reader is referred. We there also noticed Captain Maconochie's labours in that settlement, and anticipated great advantages from them. We regret to learn, from his communication above mentioned, that his plans were never specifically sanctioned by the Colonial or Home Government, and still remain a dead letter; that he succeeded in every case, just in the ratio in which he was enabled to approach, or was kept at a distance from, applying them; and that he is now in London submitting the whole subject to the consideration of the Colonial Secretary. Captain Maconochie, before he went to Australia, was acquainted with the views and doctrines of phreno-

* The author had previously submitted the same views to the Phrenological Society on 2d February 1826, in an "Essay on Human Responsibility," which was printed at the Society's request, for private circulation, but never was published. The subject is also treated of in the author's "Moral Philosophy," and in many articles in this Journal, particularly, vol. iv. p. 559; vii. 385, 493; viii. 109, 481; xv. 63, 310; xvi. 1, 258, 267; xvii. 58.

logists on this topic, and carried with him a degree of light concerning the criminal mind, which none of his predecessors had enjoyed, to guide him in his practical observations. The scheme of convict management which he has devised and presented to the Home Government, embodies most of the principles which we consider sound, and have so earnestly recommended ; and it gives us much pleasure to lay an abstract of it before our readers. Great and manifold as the evils are, Captain Maconochie considers that the remedy is not difficult, and proposes the following plan of improvement.

Two sentences should be pronounced against convicted criminals—first, banishment for 7, 10, 15, or other term of years, from the parent country ; and, secondly, *hard labour in a penal settlement until discharged under its regulations*. The two sentences should have no necessary dependence on each other. The expatriation should be considered as imposed to protect the society that has been injured from the early return of one who has shewn himself weak amidst the temptations incident to it. The discipline in the penal settlement should be maintained until this *weakness is converted into strength*. Like a patient in an hospital, the convict should not be discharged at the expiry of a term, *unless cured*.

Captain Maconochie states confidently, from much experience, that the mixture of a free and convict population, while the latter is still in a state of bondage, is fatal to both. The administration of justice is impaired by its dependence on colonial interests and prejudices, and becomes inconsistent ; while its importance is lost sight of amidst a variety of other questions, interests, and details. The expense, also, is greatly increased by the heavy police—judicial, military, and executive—which is indispensable to keep down the confusion, abuse, and crime, thus created. “ Penal settlements, therefore, should be separated from free colonies altogether, and not even be subject to them, but be kept in direct correspondence with the Government at home.” Captain M. attaches great importance to this point.

His suggestions for the improved management of penal settlements are the following :—

1. The sentence, besides prescribing a term of banishment, should impose a fine (graduated according to the offence), which the convict should be required to redeem exclusively by labour and good conduct ; a sum being placed to his credit daily as wages, according to his behaviour, or charged to his debit, if he neglected his labour, or otherwise offended. This fine should, in no case, be dischargeable by a mere payment in money, obtained by the convict from any

source besides his own labour and good conduct in prison. Indeed, to do away with every idea of this kind, Captain M. proposes that "a factitious debt of 6000, 8000, or 10,000 marks should be created against every man, according to his offence," and be redeemable in the manner now mentioned, and that these marks should exercise all the functions of money in relation to him.

2. No ration, except bread and water, should be allowed to him of right; for everything else he should be charged in marks as the representative of money.

3. He should be allowed to expend the marks which he has earned for necessaries, or even for present indulgences, at his discretion, but never to obtain his discharge till, from his labour and economy combined (both voluntary), he should have fully redeemed the sum charged against him in his sentence.

It seems almost unnecessary to contrast this system with the one now in operation. In the present one, everything tends to evil: in the one proposed, everything would tend to good. The introduction of a representative of wages, to be earned by the convict's labour and good conduct, would give him an interest in exertion, and present motives for self-control. These alone would change entirely the character of the convict's condition. "They would remove that taint of slavery which, at present, corrupts every portion of it. The absence of fixed rations, also, irrespective of exertion or conduct, would further improve the men. Under both stimulants, they would give twice the amount of labour that they do now, with half the superintendence; and this alone would make their maintenance much more economical." As a farther strengthener of the motives to good conduct, the utmost certainty should be given in prisons to the operation of the system of marks. A reward earned should unfailingly be given, and a fine incurred by neglect or misconduct, should unfailingly be exacted. There should be as little discretion in regard to either as possible, in order that the men may speedily learn to look on themselves as the architects of their own fortune, and not to trust to deception, evasion, and playing on the weaknesses of others, as means of escaping from labour or shortening the periods of their confinement. Voluntary labour and economy, thus practically enforced (as the only means by which the convicts could ever obtain their liberty), would tend to cultivate in them habits of activity and self-command, the most important preparations for a return to freedom. By this means, also, the sense of justice and honesty, and the habit of connecting enjoyment with virtuous action, and suffering with negli-

gence and vice, would be fostered ; while the *certainty* of the consequences of their own conduct would contribute towards steadying their minds, and eradicating that gambling spirit which is so characteristic of the convict class, and which at present everything tends to encourage.

4. During a period of not less than three months, commencing with the convict's first arrival in the penal colony, his treatment should consist of moral, religious, and intellectual instruction, in a penitentiary. During this period, he should be secluded from all general intercourse, beyond the society of a few individuals undergoing a similar course of discipline ; but access to a public hall should be allowed to him to hear public worship and receive general instruction. By regularity of conduct and proficiency in learning, he should earn a recompense in marks, and by negligence and disobedience forfeit these. This initiatory schooling would wean him from vicious recollections, cultivate and gain his will, and enlarge his understanding, and would thus lay the foundation for subsequent moral and intellectual improvement, by continued though less exclusive care. The issue from this secluded stage of treatment should be made, in every case, to depend on proficiency. " I speak on all these points," says Captain M., " experimentally ; for, however imperfect were all my proceedings in Norfolk Island, and although thwarted in every possible way, they yet left no doubt of the tendency of the principles on which they were founded."

5. After this probation, the men should be required to form themselves into parties of six, who for a time—not less than eighteen months (and longer in case they should not redeem the stated number of marks)—should be held to constitute one family, with common interests and mutually responsible ; labouring, if they labour, for common benefit ; and idling, if they idle, to the common injury.

By this arrangement, all interests would be engaged in the common improvement, and the better men would have a direct interest in the conduct of the worse, and therefore a right to watch, influence, and, if necessary, control them. This would create an *esprit de corps* in the whole body, *directed towards good*,—a matter of first-rate importance in the management of convicts.

6. When the convict had acquitted himself in a satisfactory manner, and redeemed, by his industry and good conduct, the marks allotted to these different stages, which should extend over three years at the least, he might be rewarded by a ticket of leave in the penal settlement. In this sphere, the means should be afforded him to earn a little money, as a provision for his return to society. Small farms

or gardens might, with this view, be let at moderate rents, payable in kind, to the men holding this indulgence, and the surplus produce, beyond their rents, should be purchased from them at fair prices into the public stores.

This mode of obtaining supplies, besides creating habits of industry and cultivating the feeling of private interest among the convicts, would tend to improve the agriculture and develop the resources of the settlement; the cost of the produce would be nearly as low as if raised directly by the Government, and much lower than if imported.

7. A fixed proportion of the prisoners (say 3, 4, or 5 per cent.), should be eligible to fill subordinate stations of trust in the general management, and receive (say) 6d. per day as money salary, besides the marks attached to their situations.

The effects of this arrangement would be, to enlist a proportion of the best prisoners in the service of the establishment; to influence the conduct of the others by enabling them to look to the same advantage in their turn; and to allow of a diminution in the number of the free officers employed, and also of the military guards, who are much more expensive and less efficient instruments for controlling and directing the convict mind and labour.

8. The final liberation of the prisoners from restraint, as well as every intermediate step towards it, should in every case depend solely on having served the prescribed time, and earned the corresponding number of marks. No discretion on either head should be vested in any local authority. The whole arrangement should be, as it were, a matter of contract between each convict and the Government; and the local authorities should have no other control over it than to see its conditions, on both sides, punctually fulfilled.

On a final discharge, every facility should be afforded to the men to disperse and enter as useful members into the free society of the colonies; but they should not be permitted to return home till the expiry of the period of banishment prescribed by their sentences.

Besides these means of improvement, Captain Maconochie proposes to employ largely secular and religious instruction, and to institute courts of justice, easily and conveniently accessible to the prisoners, allowing them, at a particular part of their probation, even to act as jurors in trying delinquents, and to be eligible to serve as police or special constables. As they approach their freedom, well regulated amusements—such as music, readings, experimental and other lectures—should be open to them on suitable payment for admission. “In every way their minds should be stirred and their positions raised up to the usual privileges of free-

dom, before these are fully confided to them. Much may eventually depend on the transition not being at last too great."

Such is a condensed, and therefore unavoidably an imperfect, sketch of Captain Maconochie's scheme for an improved administration of prison discipline in our penal colonies. We have endeavoured to convey his views as accurately, and as much in his own words, as possible; omitting, however, many practical details and explanations, for which our pages do not afford space. A few words will suffice to state our conclusions on the question. We agree with Captain M., that the subject "possesses the very highest interest, both moral and political, and that no nation can have a right to punish its criminals by necessary degradation, or to select any portion of its subjects, no matter what the principle of selection may be, to make incarnate devils of them." One unhappy victim is stated, in a Parliamentary report, to have said, "that when he went to Norfolk Island, he lost the heart of a man and got that of a beast instead;" and the case could scarcely be otherwise. But besides this—"for good or for evil, from their numbers, and the influence which their characters must exercise on the free communities which absorb them, these men must be considered as the seeds of future nations; and the peace, order, and harmony, also the moral, religious, and political welfare of the whole southern hemisphere, may thus be said to be bound up with the character of the treatment to which they are subjected while in bondage, and its *moral results*."

While, therefore, we consider the natural and inevitable consequences of the existing system to be the worst possible, both for the convicts and society, we are of opinion that Captain M. is in the right when he says, that the essential working principles of the *new* scheme are of an opposite kind. They are calculated, *first*, to make circumstances in prisons favourable to virtue, not to vice—to ingenuity and exertion, not to idleness and sloth; and, *secondly*, to reinforce these circumstances by substituting the arts of moral, religious, and other rational persuasion and exhortation, for direct physical enforcement in maintaining discipline, in all cases in which they can possibly be made to apply, or be adequately felt. In short, the new scheme seems fairly calculated to reverse the effects of the old, and to convert wild beasts into men, instead of men into wild beasts. Captain Maconochie considers that "one great recommendation of it, also, is its tendency to execute itself. This system," says he, "more than any other yet proposed, appears calculated to work certainly

and easily, at any distance, and under any executive power that is only, in an average degree, intelligent, honest, and humane. High talent seems not to be required. The arrangement being one of wages, of profit or loss, according to work and observance of the rules of the prison, it will not apparently be more difficult to manage than any common factory, or other assemblage of labourers working at *piece-work*."

We agree with Captain Maconochie that this scheme is better calculated to work well than any of those that have preceded it; but this is saying little in its favour, for *they* have wrought only evil. It appears to us, that its success will depend much more upon the views and qualifications of the officers who are employed to carry it into effect, than Captain Maconochie supposes. On a former occasion we remarked, that, in improving human nature, as in reclaiming an agricultural soil, the more barren the ground, the higher must be the cultivation applied to it, in order to remove its sterility. In the case of criminals, this cultivation can come, not from their own ill-constituted, uninstructed, and misdirected faculties, but only from officers of high moral and respectable intellectual endowments, whose warmest desires shall be devoted to the success of the scheme. Farther, as, in every other art, scientific skill is recognised to be far superior, both in the certainty of its application and the value of its results, to mere unskilled empirical practice, so, in our opinion, there is no exception to this rule in the art of reforming criminals. If, then, the execution of the new scheme shall be committed to men who recognise no natural defects or peculiarities in the criminally disposed mind; who assume, as the basis of their treatment, that the *will* to act virtuously under the prison-regulations, may be produced in the convicts by the mere machinery of the system, and by influence of the prisoners on each other, helped out, perhaps at times, by punishment—the country, we apprehend, will witness another failure, and suffer a fresh disappointment. It appears to us, that there is absolutely no road to success in this matter, except by employing officers who understand the *real* mental constitution and condition of the individuals committed to their charge, and authorising them to act on this knowledge, and in the spirit which it dictates, in working the mechanism of the law. It is certain that the law can enact *only a mechanism*; while the sense and intelligence which shall render it a living power must come from the officers. It requires no spirit of prophecy to predict, that the results attained will correspond much more

with their intelligence and spirit than with the mere words of the act of Parliament, should the two happen to come into collision ; and the danger of this occurring should be provided against in selecting them.

It is only justice also to Captain M. to observe, that it is not sympathy with any mere *physical* suffering inflicted on the convicts by the present system that prompts him to desire reform. He states that more physical exertion is undergone, and greater privations are endured, by many an honest English labourer, than are even now imposed on the convicts by law. But the system is so contrived as to work out the perversion of all their natural feelings, and the misdirection of all their intellectual faculties ; and by way of curing this moral degradation, severe punishments are resorted to. These inflictions, however, instead of removing, increase the evil. The *system* obviously fosters, although it does not create, the condition of mind which leads to the offences for which these punishments are inflicted ; and in so far as it does so, the punishments can be viewed in no other light than as unnecessary and unprofitable, and therefore cruel. It is this whole scheme of moral and intellectual degradation, and its attendant *unnecessary* and profitless suffering, that rouse Captain M.'s indignation, which, however, he never unbecomingly expresses in any of his communications.

We do not attach blame to either a Whig or a Tory *administration* for the existence of these horrors. If either were in fault, perhaps the greatest share of blame would attach to Lord John Russell, for the subject was last under his review ; and his successors have only maintained the course adopted by him. But, in point of fact, he and they only gave effect to the *general* views of the age in regard to convict management. There has long been a more enlightened minority which has protested against the whole principles on which this management is founded. Sir George S. Mackenzie, in particular, in a representation and letter dated in 1836, accompanied by numerous certificates,* called the attention of Lord Glenelg, then Secretary for the Colonies, to the application of Phrenology to prison discipline ; and he afterwards transmitted a copy of the same documents to his successor in office, Lord John Russell ; but they met with no attention. The facts, however, now brought to light, speak trumpet-tongued in favour of reform, and warrant us in saying that *the present system cannot be suffered longer to endure*.

Although, in its leading features, Captain Maconochie's new scheme is a practical embodiment of phrenological prin-

* Appended to the 5th edition of Combe's "System of Phrenology." See *ante*, vol. x., p. 112, 388.

ciples, yet he nowhere alludes to Phrenology as the source from which his views have been drawn. Considering the deaf ear which continues to be turned towards it in influential quarters, and the numerous prejudices which he has to contend with and overcome, before he can obtain an official adoption of his suggested improvements, we can understand the motives which dictated his silence on this topic. But, in dealing with this subject, *we* lie under no such restraints, and we must, therefore, speak plainly. It is admitted by all sensible men, that, in attempting to modify physical substances, and to apply them to useful purposes, it is of great advantage to arrive at a scientific knowledge of their elementary qualities, of the laws which govern the combinations of their elements, and of their modes of action. Common sense dictates, that corresponding information in regard to the elementary faculties of the mind, their spheres of use and abuse, their combinations, and their relations to external objects, must be equally important to those who aim at modifying, improving, and directing the dispositions and intellectual powers of human beings. Now, Dr Gall's discovery of the functions of the brain, enlarged and elucidated by subsequent inquirers, places this information in regard to the mental faculties within the reach of all who desire to obtain it; and as this is *Nature's torch* held up to illuminate human darkness, we are fairly entitled to charge those who decline to use it, with the whole evils which they spontaneously produce by following their own lights, and which this better philosophy would have enabled them to avoid. This is no question of human wisdom, or human pride, or human ambition. The point at issue is simply this—Will they open their eyes and see, and apply their understandings and understand, facts which *God* has established, and by acting on which they may mitigate the heart-rending mass of misery, and put an end to the *unnecessary*, useless, and, therefore, cruel inflictions, which we have described? or will they keep their eyes shut, and persevere in false theories, and in practices which experience has proved to be pernicious? Will they prolong their own system, perverting and degrading the faculties of their unfortunate fellow-creatures? Will they sacrifice humanity and the public welfare to a false consistency, and call these odious results expediency and wisdom? If we could be insensible to the unspeakable evils which have attended the schemes of the men who, for so many years, have turned a deaf ear to our suggestions, we might assume an air of triumph in pointing to the most miserable failure of all their own principles, plans, and practices. Captain Maconochie has held the mirror up to nature, and shewn them the effects

of *punishment*, when applied as the leading means of preventing crime, and of improving criminals; and, unmoved, we could leave them to enjoy all the pleasure which they can possibly extract from the picture, were it not that compassion for their victims raises our deepest sympathies and regrets. We implore them to yield to the dictates of reason and humanity, and *try* whether the new system will not yield better fruits (*for worse it cannot possibly produce*) than the old. Captain M.'s scheme is applicable to prisons and penitentiaries at home as well as abroad, and may be tried on a limited scale, and in the most cautious manner. But let it be tried *fairly*, and by persons who understand its principles, and *desire* that it should succeed.

This leads us to another remark. The admitted advantages attending scientific knowledge, compared with mere *vague and individual impressions concerning a subject*, should suggest to Captain Maconochie, and every other individual who may be charged with the execution of the new plan, the duty of applying the lights of Phrenology, as far as they will go, in all the *discretionary* parts of the treatment. By no other means can they act securely, consistently, and successfully. The cerebral development of every offender should be examined and recorded; and, where places of trust and influence are to be disposed of, the men who, by previous labour and good conduct, have earned the right to be presented to them, and who, besides, have the best moral and intellectual development of brain, should, *cæteris paribus*, be preferred. This rule will be found, in the end, to be the most humane, just, and expedient for the *whole* community of offenders; because the highest minds are most needed, and best calculated to do good, in such a sphere. We can easily foresee that certain individuals with large animal, active and powerful intellectual, and very deficient moral organs, may, while under the ordeal of servitude, restrain their propensities, perform their prescribed tasks, and earn the necessary marks for promotion, but yet the moment they are placed in a situation in which *internal self-acting* morality must supply the place of previous external restraint, will prove wanting and inefficient. Such men, owing to their unscrupulous dispositions and powerful intellectual capacities, will be plausible, deceptive, and dangerous officers, fountains of injustice to all under their authority, constantly doing evil, yet seeming to do good, and extremely difficult to detect and expose. No *arbitrary* addition should be made to any man's sufferings because he has an unfortunate development of brain; but in selecting, at discretion, instruments for the moral reforma-

tion of others, we should use the most complete means in our power to *ascertain* the actual qualities of the instruments, and prefer those which are best suited to accomplish the end in view. Phrenology will afford valuable aid in attaining this object.

Farther,—We consider that it would be highly advantageous to the criminals themselves to teach them Phrenology as part of their moral and intellectual instruction. Many individuals of average minds, who are untrained in mental philosophy, assume their own feelings and capacities to be the types and standards of those of all other men ; and why should not the lowest class do the same ? In point of fact, they actually do so ; and many of them believe that the portion of society which is out of prison, is, at the bottom, as unprincipled, profligate, and criminal as themselves, only more fortunate and dexterous in avoiding temptation and detection. One means of correcting these erroneous impressions, and enabling such persons to understand their own dispositions, and the real relations in which they stand to virtuous men, and also of delivering their minds from the admiration of fraud, violence, obstinate pride, and many other abuses of the propensities, which at present they regard as virtues,—would be to teach them the functions, the uses, and the abuses of every faculty, and particularly the peculiarities in their own cerebral organization, which render their perceptions unsound on certain points, and their proclivities in certain directions dangerous.

Finally,—Captain Maconochie should prepare the public mind, by anticipation, for a result that is inevitably certain, namely, the impossibility, by any human means, of reforming the very lowest type of offenders ; who, on account of their defective moral and intellectual organization, must, in justice to themselves and to society, be restrained during life.

The day may be still distant when these suggestions will be acted on ; but until truth, reason, and humanity are adopted as the guides of our criminal legislators and their executive officers, so long will failure and suffering endure. The whole subject, we understand, is at this moment in the hands of the Secretary for the Colonies, and we shall look with much anxiety for his determination. We repeat our sense of the deep obligation which the whole country lies under to Captain Maconochie, for the sacrifices and noble efforts which he has made in this most important and interesting cause.

GEO. COMBE.

45 MELVILLE STREET, EDINBURGH,
8th February 1845.

II. *On the Relative Liability of the Two Sexes to Insanity.*

By JOHN THURNAM, M.D. Read before the Statistical Section of the British Association at York, September 28. 1844, and originally published in the Journal of the Statistical Society of London, vol. vii., p. 310.

The opinion which appears to have recently obtained, that insanity is more prevalent amongst women than amongst men, has, I believe, originated in an erroneous method of statistical analysis. Dr Esquirol, who appears to have inclined to this view, was at great pains in collecting information as to the proportion of *existing* cases of insanity in the two sexes in nearly every country of the civilized world; and, having found that, taking the average of different countries, the proportions were those of 37 males to 38 females, he concluded that his inquiry refuted the opinion which has prevailed since the time of Cælius Aurelianus,* that women are a little less subject to insanity than men.† In this view, Esquirol is followed by Drs Copland, Browne, and Millingen; and indeed by every recent writer on insanity. It is, however, well known that, in all European countries, the proportion of adult females in the general population exceeds that of males. In England and Wales, according to the census of 1821, there was an excess, at all ages above 15 or 20 years, of about 4 per cent.; and according to the more accurate census of 1841, an excess of 4 per cent. at all ages, and of about 8 per cent. at all ages above 15 or 20 years. Of this general law, Esquirol was aware; but he does not appear to have known that, from 20 to 50 years of age, when, in this country at least, insanity chiefly occurs for the first time, there is a still greater excess of females; an excess which is higher from 20 to 30 years of age than it is subsequently; it being 12 per cent. from 20 to 30, 6 per cent. from 30 to 40, and 4 per cent. from 40 to 50 years of age. Thus, assuming only a like liability of the two sexes to insanity, we should expect to find a much greater number of cases amongst women, and one corresponding to this excess of the same sex in the general population, at those ages when insanity chiefly occurs.

* Cælius Aurelianus, *De Morbis Acutis et Chronicis*, Amstel. 1709, 4to, pp. 326, 339.

† Prichard on *Insanity*, 1835, p. 162. Esquirol, *Maladies Mentales*, 1838, tome i., p. 37; ii., p. 676.

The only two institutions, however, that I am acquainted with in this country in which there has been any material excess of females admitted during extended periods, are the hospitals of Bethlem and St Luke; and in these there has been, at different and extended periods, an excess of women admitted, amounting to 20, 30, and even 45 per cent. This, however, may depend on local circumstances peculiar to the metropolis; and, consequently, does not in any degree establish Dr Haslam's opinion, that, "in our climate, women are more frequently afflicted with insanity than men;" a statement which has been recently repeated by Dr Webster in his remarks on the Statistics of Bethlem Hospital.* That there may be something peculiar in the circumstances of the metropolis in connection with the prevalence of insanity in the two sexes, at least as regards the poorer and more dependent classes of the community, is a view which is confirmed by there having been a slight excess of females admitted both at Hanwell and in the licensed metropolitan asylums for paupers; though it is to be observed that, during the last five years, the excess at Hanwell, never very great, has been gradually diminishing, and up to 1843 only amounted to 2 per cent. According to the census of 1841, there appears to be a larger proportion of females living in the metropolis from 20 to 50 years of age, as compared with the kingdom generally; but whether the difference be large enough to account for the greater number of women admitted into the metropolitan asylums and hospitals is, perhaps, doubtful. The excess per cent., at these ages, of women over men, appears to be in the proportion of 18 in the metropolis to 8 in the country; that is to say, there were, in 1841, living in England and Wales 100 men to 108 women, and in the metropolis 100 men to 118 women, at from 20 to 50 years of age. At all ages, there appears to be a greater proportion of females in the metropolis than in England and Wales; there having been an excess of 13 per cent. at all ages, and of 19 per cent. at all ages above 20. Whatever may be the cause of the difference in the relative proportions of the two sexes admitted into metropolitan asylums, it does not appear to extend to the middle and upper classes of society; for in the licensed metropolitan asylums for private patients (1833-40), there has been an excess on the side of males admitted, amounting to 38 per cent.

* Haslam, *Observations on Madness*, 2d edition, 1809, p. 245. Webster, in *Medico-Chirurgical Transactions*, vol. xxvi., 1843, p. 380. [See *Phren. Jour.*, vol. xvii., p. 204.]

But there is another fallacy in Esquirol's method of investigating this subject, in consequence of his having compared with each other the *existing*, instead of the *occurring*, cases of insanity in the two sexes. Were the progress of insanity the same in men as in women, and our object simply that of determining the relative liability of the two sexes to insanity, the comparison of the cases existing at one time, would serve as well as that of the numbers occurring during any given period. This, however, is not the case; for, as I have elsewhere shewn, the mortality of insane men, on an average, exceeds that of insane women in the public asylums of this kingdom by 50 per cent. Thus we find that the excess in the mortality of males above females is, at the Retreat, at the rate of 37 per cent., in the metropolitan licensed asylums of 63 per cent., at Bethlem of 71 per cent., at Hanwell of 80 per cent., and at the York Asylum of 93 per cent.; the mortality in males being nearly double what it is in females. As the mortality of males in the general population is not more than 7 or 8 per cent. higher than that of females,* it will be evident that, out of equal numbers attacked, the existing cases of insanity in women will accumulate much faster than those in men; and that they will necessarily be much more numerous, as compared with the *occurring* cases, than will the existing cases in the latter sex. According to the "Report of the Metropolitan Commissioners in Lunacy," there were, in asylums of all descriptions in England and Wales, on the 1st of January 1844—

Insane Persons.	Males.	Females.
11,272	5,521	5,751; of whom there
were 7,482 paupers.	3,542	3,950†

—being an excess on the side of females, of *existing* cases of insanity, of 4 per cent. in all classes, and of nearly 12 per cent. in paupers.

It may, perhaps, be objected to the results of any inquiry into the liability of the two sexes to insanity which is founded on the proportions of males and females admitted into public and private asylums, that, from various causes, women are more likely to be detained at home than men. As regards the middle and higher classes, I believe this to be the case; but, as respects the pauper insane, I do not think that such

* The mean annual mortality of England during four years, 1833-41, was 2.31 per cent. for men, and 2.13 per cent. for women.—Fifth Report of Registrar-General, p. xi.

† Report, 1844, p. 184.

a tendency can affect the results in any material degree. Women are, indeed, sooner rendered entirely dependent, as a consequence of mental disorder, than men; and I should conclude that any greater indulgence to, and tolerance of, the eccentricities of the sex, when the subjects of insanity, will be more than compensated by the frequently greater difficulty of effecting the removal to an asylum of the insane father, husband, or brother.

In order that the comparison of the occurring cases be a strictly accurate one, the proportions of the two sexes, at the several ages, *attacked with insanity* for the first time, should be compared with the proportions in which the two sexes, at the same ages, *exist* in the community in which such cases occur. The nearest approximation to this method which we have the means of employing is, by assuming that the proportions of men and women *admitted* into public institutions during extensive periods represent, as on the whole they probably do represent, the cases which *occur* for the first time. The following table is calculated on this principle. (See p. 127.)

On an examination of this table, we ascertain that, in 24 of the 32 asylums which it comprises, there has been a decided excess of men in the numbers admitted. In many British asylums, the excess amounts to 25, 30, and even 40 per cent.; and in the whole number of 32 asylums, there is an average excess on the side of the male sex of 13.7 per cent. In the 9 English county asylums, contained in the table, the excess amounts to 12 per cent. Dorset is the only county asylum in which the proportion of women admitted has materially exceeded that of men.

Whether in this asylum an unusually large provision has been made for females, and, consequently, a larger proportion of applications for the admission of men have been rejected, or whether in the county of Dorset any peculiar causes are actually in operation, which are capable of explaining such an exception to a general law, I am at present unable to determine.

Having thus shewn that, in the principal hospitals for the insane in these kingdoms, the proportion of men admitted is nearly always higher, and in many cases much higher, than that of women; and as we know that the proportion of men in the general population, particularly at those ages when insanity most usually occurs, is decidedly less than that of women, we can have no grounds for doubting that men are actually more liable to disorders of the mind than women.

Table shewing the Numbers and Proportion of each Sex, out of 71,800 Cases, admitted into various Asylums.

Name of Asylum and Period.	Numbers of each Sex admitted.		Proportions per cent. of each Sex.		Excess per cent. of one Sex over the other.	
	Male.	Fem.	Male.	Fem.	Male.	Fem.
1. Bloomingdale, New York . . . } (20½ years, 1821-42)	1,692	906	65	35	86	...
2. Siegburg (9 years, 1825-33) . . .	404	226	64	36	78	...
3. Dumfries (4 years, 1839-43) . . .	147	92	61.5	38.5	59	...
4. Charenton (11 years, 1815-25)* . . .	1,245	804	61	39	54	...
" (8 years, 1826-33) . . .	932	625	60	40	49	...
5. Schleswig (15 years, 1820-35) . . .	322	224	60	40	52	...
6. Licensed Metropolitan Asylums, not } paupers (1833-40) . . .	1,419	1,028	58	42	38	...
7. Perth (11 years, 1827-38) . . .	190	141	57.5	42.5	34	...
8. Cornwall (22 years, 1820-42) . . .	407	310	57	43	31	...
9. Nottingham (31½ years, 1812-43) . . .	937	726	56.3	43.7	29	...
10. Armagh (16½ years, 1825-41) . . .	649	505	56	44	28	...
11. Clonmel (7 years, 1835-42) . . .	206	162	56	44	27	...
12. York Asylum (25½ years, 1814-40) . . .	768	607	56	44	26	...
13. Lancaster (26 years, 1816-42) . . .	2,042	1,599	56	44	27	...
14. Maidstone (5 years, 1833-38) . . .	195	158	55	45	23	...
15. Glasgow (28 years, 1814-42) . . .	1,456	1,191	55	45	22	...
16. Richmond, Dublin (5 years, 1832-39) . . .	331	277	54.5	45.5	19	...
17. Lincoln (21½ years, 1820-42) . . .	467	391	54.5	45.5	19	...
18. Dundee (22 years, 1820-42) . . .	496	427	53.7	46.3	16	...
19. Gloucester (20 years, 1823-42) . . .	661	588	53	47	12	...
20. Frankford, U.S., Society of Friends } (25 years, 1817-42)	405	379	52	48	7	...
21. Worcester, U.S., (10 years, 1833-42) . . .	806	751	51.8	48.2	7	...
22. Hartford, U.S., (19 years, 1824-43) . . .	640	607	51.3	48.7	5	...
23. Wakefield (23½ years, 1818-42) . . .	1,527	1,479	51	49	3	...
24. Belfast (13 years, 1829-42) . . .	621	622	50	50	...	16
25. Woodbridge (13 years, 1829-42) . . .	499	500	50	50	...	20
26. Carlow (10 years, 1832-42) . . .	247	250	49.7	50.3	...	1.2
27. Hanwell (11½ years, 1831-42) . . .	1,189	1,219	49.3	50.7	...	3
28. Cork (13 years, 1827-39) . . .	954	1,009	49	51	...	5
29. Licensed Metropolitan Asylums, pau- } pers (6 years, 1833-40) . . .	1,479	1,520	48	52	...	7
30. York Retreat, Society of Friends, } (44 years, 1796-40)	282	333	45.8	54.4	...	18
31. Dorset (11½ years, 1832-43) . . .	184	224	45	55	...	21
32. Bethlem, curables† (20 yrs., 1823-42)	1,782	2,622	40.5	59.5	...	47
Total of the above (1796-1843)	25,601	22,502	53.2	46.8	13.7	...
	48,103					
9 English County Asylums; 8, 9, } 13, 14, 19, 23, 25, 27, and 31 }	7,641	6,803	53	47	12	...
33. Bethlem, all cases (46 years, 1748-94)	4,042	4,832	45.5	54.5	...	19
34. St Luke's, curables (82 yrs., 1752-1834)	6,037	8,786	40.7	59.3	...	45.5

For other Metropolitan Asylums, see also 6, 27, 29, and 32.

* Esquirol, Des Maladies Mentales, tome ii., pp. 663 and 668.

† Haslam, Observations on Madness, 2d edition, 1809, p. 245.

‡ Webster, Medico-Chirurgical Transactions, vol. xxvi., 1813, p. 361.

It is always satisfactory when those reasonable conclusions, which we have previously formed from general considerations of the nature and tendencies of the particular causes which are in operation in any class of facts, are confirmed by accurate statistical inquiry. From a just consideration of the differences in the physical and moral constitution, as well as in the generally prevailing external circumstances, of the two sexes in civilized communities at the present day, it was, I think, *à priori*, highly probable that men should possess a somewhat greater liability to mental disorders than women; and this was a conclusion at which, independently of any statistical inquiry, the ancient physicians had even arrived. And it is thus important to observe, that it was by a *faulty application of the methods of statistical analysis* to this question, by the deservedly distinguished Esquirol, that a contrary conclusion was come to by that diligent, but, in statistical questions, not always accurate, inquirer; and that it has been chiefly on his authority, and on that of authors who, on this subject, have copied from him, that we have been in danger of admitting the erroneous doctrine that women are more liable to insanity than men.

It is still highly probable that different countries,* and perhaps even the same country at different periods, as well as different communities and different ranks and classes in the same country, may vary very much as regards the proportion in which men suffer from insanity more than women. Thus, it appears tolerably well ascertained, that a larger proportion of women, relatively to the other sex, become insane in France as compared with England; though, as we have seen, this is less certain as respects the metropolis when compared with the rest of this country. In this respect, we have seen that the statistics of our own metropolis appear to resemble those of France, rather than those of the rest of England.

In this point of view, the experience of the Society of Friends is not without considerable interest. At first sight it might appear that, in this community, women are actually more liable to insanity than men; for, without any greater facility existing for the admission of females, the number of

* The above table shews that, during 15 years, at the asylum at Schleswig, Holstein, the proportion of men admitted exceeded that of women by 52 per cent.; and at Siegburg, near Bonn, on the Rhine, during 9 years, by 78 per cent. According to the official return of Dr Holst, the existing number of the insane throughout Norway, in the year 1825, was in the proportion of 1 to 508½ of the male, and 1 to 597½ of the female population.

women, members of that society, who have been admitted into the Retreat, has exceeded that of men by 18 per cent., or, in other words, only 45 men have been admitted to 55 women.* But it is requisite to know the relative proportions of the two sexes in the Society of Friends, as a body, before we shall be justified in determining that insanity is really more prevalent amongst the females of that community. By returns, however, from all parts (each "monthly meeting") of England and Wales, it appears that, in the Society of Friends, the excess of women over men, at all ages, amounts to about 20 per cent.; and there can be little or no question that the excess of *adult* females is still greater.† Indeed, after 15 years of age, before which insanity seldom occurs, we can, I think, scarcely estimate the excess of females over males in this community at less than from 30 to 35 per cent. And thus assuming, as there is every reason for doing, that, as respects the proportion of the two sexes attacked, the experience of the Retreat represents that of the Society at large, it will appear that, in this community, there are still from 10 to 14 per cent. more men than women attacked with mental derangement. This is an excess on the side of men, considerably less, probably, than that which prevails in the kingdom generally. The progressive accumulation of females in an hospital for the insane is well illustrated by the experience of the Retreat, where, at the end of 45 years, the women exceeded the men by 30 per cent., and where the average number of women resident during the whole period was 35 per cent. higher than that of men. At the asylum for the Society of Friends at Frankford, Pennsylvania,‡ (1817-42), the proportion of men admitted exceeded that of women by 7 per cent. But in the general population of Pennsylvania and the adjacent states, in common, more or less, with nearly all newly-settled countries, the propor-

* The numbers in the table refer to cases of all descriptions admitted at the Retreat; but the proportions are the same, when members of the Society of Friends are separately considered.

† This larger number of women in the Society of Friends may, no doubt, be chiefly attributed to the larger proportions of men who emigrate, and leave the Society, and are disunited from it; for, on an examination of the registers of the Society from 1800 to 1837, I find that the births registered were in the proportion of 105.7 males to 100 females; viz. 8207 boys, and 7759 girls. In the whole of England and Wales, in three years, 1838-1841, the births registered were in the proportion of 104.8 boys to 100 girls.—Fourth Report of the Registrar-General, 1842, pp. 9, 10.

‡ This asylum is more particularly appropriated to the Society of Friends in the states of Pennsylvania, New Jersey, and Delaware; but patients from other states are also admitted.

tion of males exceeds that of females by about 4 per cent., and, at from 20 to 40 years of age, by 6 per cent. There, however, may be, and probably is, less difference in this respect in the Society of Friends in the states alluded to, or the women may even preponderate in this community.

In nearly all points of view it may, in conclusion, be stated, that women have an advantage over men in reference to insanity; for not only do they appear to be somewhat less liable to mental derangement than men, but, when they become the subjects of it, the probability of their recovery is on the whole greater, and that of death very considerably less. After recovery from a first attack, however, the probability of a relapse, or of a second attack, is perhaps somewhat greater in women than in men. Still the more favourable results, as regards the female sex, in all these particulars, appears to be much less marked at the Retreat, than in nearly every other institution with which I am acquainted. This is worthy of notice, as it is probably due to the greater general regularity of life in the men of this community, as compared with that of men in the community at large; or, at least, than in those parts of it which furnish inmates in the asylums compared.

RETREAT, YORK, August 1844.

III. *Contributions towards a more exact and positive knowledge of the organ named Language, and its Function.* By Mr RICHARD CULL. (Continued from p. 38).

A statement of Dr Gall's mature views on the organ of Language, taken from the last edition of his work, was made in the first of these contributions. He considered the organ to consist of two parts, or distinct organs, each endowed with its own function. The posterior of the two he named the organ of Verbal Memory, the anterior that of Philology.

The evidence adduced by Gall to establish his proposition that a prominent eye is a sign of a good verbal memory, has been amply verified by other observers. The form of the super-orbital plate, and the size of the superimposed portion of the brain, in relation with the talent of verbal memory, has been much less verified. And there are no records of cases in which the condition of the super-orbital plate has been observed in relation to Gall's views.

I proceed to examine the evidence of the anterior organ, named by Gall "*Sens du langage de parole; talent de la philologie, etc.; Sprach-Forschungs-sinn.*" This evidence concerns, 1. The organ's existence; and, 2. Its function.

1. *The organ's existence.*—The external sign which indicates the existence of this organ is a certain appearance of the eye. The eye is prominent and depressed.* The first class of examples cited in illustration of this form of eye, consists of certain portraits of philologers contained in the work of Dominicus Custos, which was printed at Augsburg in 1612.† The class of examples next in importance consists of the portraits of eminent scholars, most of whom are long since deceased. The third class consists of certain living scholars; and the fourth class consists of some precocious linguists.‡

The portraits give no actual evidence of the size of the *cerebral* organ, nor of the contour of the super-orbital plate of the *skull*, but merely a representation, and that by light and shadow, not by outline, of the prominence and depression of the eye. It appears to me that such pictorial records are inadmissible to prove the fact of a largely developed cerebral organ in the men, until it is shewn, by a wide induction, *1st*, That the depressed prominent eye is produced only by the great development of the cerebral part in question; and, *2dly*, That the portraits are accurate representations of the men, especially of the upper part of the face. Gall does not state that he possessed, or ever saw, the skull of a philologer with the anterior part of the super-orbital plate depressed; or the skull of a man endowed with a good verbal memory, but not a philologer, with the posterior part alone depressed. Both facts are necessary as direct evidence to support his views. If Gall had seen such skulls he certainly would have stated the fact, knowing, as he so well did, the value of direct and positive evidence.

Before quitting this part of the subject, it may be remarked, that those who adopt Gall's views are pressed by a difficulty in examining the development of these organs. When the so-called organ of Philology is well developed, its eye-sign entirely supersedes the eye-sign of the organ of Verbal Memory. A talent for verbal memory is, however, predicated on the development of the philological organ, because Gall regards verbal memory as a function common to both organs.§ The difficulty is surmounted, but the doctrine of SPECIAL function is damaged, and that doctrine is the foundation of Phrenology.

2. *Its Function.*—In describing the function of this organ, Gall places the talent for verbal memory first:—"Les personnes qui ont les yeux ainsi conformés possèdent non-seule-

* Gall sur les Fonctions du Cerveau, t. v. p. 30, 8vo ed. Paris, 1825.

† Ibid., p. 32.

‡ Ibid., p. 31, *et seq.*

§ Ibid., p. 30.

ment une mémoire des mots excellente, mais elles se sentent une disposition particulière pour l'étude des langues, pour la critique, en général pour tout ce qui a rapport à la littérature. Elles rédigent des dictionnaires, écrivent l'histoire; elles sont très propres aux fonctions de bibliothécaire et de conservateur; elles rassemblent les richesses éparses de tous les siècles; elles compilent de savans volumes; elles approfondissent les antiquités; et pour peu qu'elles aient d'autres facultés encore, elles font l'admiration de tout le monde par leur vaste érudition."* In this description there is no mention of philology. After referring to the portraits of some eminent linguists, Gall says,—“Partout où je regarde le portrait d'un homme qui s'est fait un nom dans une partie qui suppose ce genre de mémoire, je trouve de grands yeux déprimés.”† Each item in these descriptions might belong to the organ of Verbal Memory. Hence the question arises, What meaning did Gall attach to the word *philology*? This question cannot be easily answered. He could not mean the combined sense of the two words of which it is composed;‡ because he knew that each organ gives a love for its related object, and that the organ of Verbal Memory, therefore, must manifest a love for words. He seems to have adopted the word *philology* to express a knowledge of foreign languages. His ideas, however, on the subject of language, lacked precision, and were avowedly unsatisfactorily to himself.§ So far as I can gather, he places a man's native language as the object in relation to the organ of Verbal Memory, and foreign languages in relation to the organ of Philology.

The word *φιλολογία* was used in a very wide sense by Greek writers.|| It was adopted into the Latin language with a great latitude of meaning.¶ It has been adopted into the English language, and into those of Southern Europe, with a similar laxity of signification. It is now, however, employed in a precise sense by philologers to comprise, 1. The Study of the Theory of Language; and, 2. The Origin, History, Analogies, Relationships and Theory of Languages. It is obvious, therefore, that an extensive, precise, and familiar knowledge of languages must be acquired before philological investigations can be made. The words *linguist* and *philologist* are not of synonymous signification. A lin-

* Gall sur les Fonctions du Cerveau, t. v. p. 30, 8vo ed. Paris, 1825.

† Gall, *ibid.* p. 35.

‡ *φιλολογία*, composed of *φίλιω*, I love, and *λογος*, a word.

§ Gall, *ibid.* p. 13.

|| See Donnegan's Greek Lex. sub voce.

¶ See Ernesti Clavis Ciceron. sub voce.

guist is one who is acquainted with several languages : Richard Jones, the celebrated Welsh linguist, whose history has been narrated by Mr Roscoe, is an example of a linguist who is not a philologist. Philologists, however, must be linguists.

Philology is a science. It is the science of Words and Verbal Language. Like other sciences, it consists of facts, analogies, reasonings, and theories ; and to apprehend these items, Individuality, Eventuality, and the reasoning faculties, are necessary. Thus, no one organ can confer the talent for philology.

I have shewn that Gall's facts and arguments are inadequate to establish an organ of Philology ; and that such an organ cannot exist. I have now to show that a second organ of Language is superfluous, on phrenological principles, to endow man with the talent for acquiring foreign languages.

If there be an organ of Verbal Language, whose function is to perceive, remember, etc., words and verbal language, and which, like the other intellectual organs, has functional energy in proportion to its size, we cannot escape the conclusion, that a large endowment of the organ (in a healthy brain) will confer an inclination for lingual learning : it will revel in words. We find that a large organ of Colour revels in colours, Number in numbers, and so on of the other organs of the intellect. A foreign language is but a system of equivalent words or synonyms to the words of our own language. If the organ of Verbal Memory be the seat of the power which connects the verbal sign with the thing signified in a man's native language, it must also give the ability to connect a verbal sign in any other language with the same thing. The words *asp*, ~~isus~~, *equus*, *caballo*, *cavallo*, *cheval*, *pferd*, are equivalent words in the Arabic, Greek, Latin, Spanish, Italian, French, and German languages, to the English word *horse*. The mental process of connecting with the animal each of those words as its sign, is the same in all men to whom those several languages are native. Those equivalent words may be regarded as synonyms of the word *horse*. Now, it is well known, that in some rich languages there are more than eight synonyms to certain words ; and those synonyms differ as widely from each other as the above equivalents : Hence the conclusion forces itself, that if the organ can connect many synonyms in a man's native language, as signs of the same thing, it must be capable also of connecting the equivalent words of several languages as synonyms, or signs of the same thing. And, therefore, a second organ of Language to endow man with the talent for acquiring foreign languages is unnecessary.

It is very generally felt, that Gall's published statements and arguments have not established his view of his so-called organ of Philology. They failed to convince Dr Spurzheim, although he had the advantage of conversations and explanations which most others could not obtain. The circumstance that the two configurations of the eye described by Gall were not admitted by Spurzheim as evidence of the existence of two distinct organs of Language, is a plain indication that the precise condition of the super-orbital plate, in relation to the faculty of Verbal Language, is unknown. Spurzheim admitted but one organ of Language, viz. Gall's organ of Verbal Memory. "It is quite true," says Spurzheim, "that some easily learn the spirit of different languages without having a great memory for words, and that others readily acquire its words without catching the spirit of a language; yet it seems to me that the spirit of words, and philology in general, depend on the same special faculty. In the philosophical part of Phrenology,* I shew that judgment and memory are not different degrees of activity of any faculty, but general modes of activity of several, and that each may exist independent of the other."† He appears to attribute the talent for verbal memory to the memory of the organ; and the talent for the spirit of languages, and philology in general, to the organ's judgment. "It seems also to me," continues Dr S. in the same paragraph, "that the organ of Words must have its laws, as well as those of Colour, of Melody, or any other faculty; now the law of words constitutes the spirit of language. I am satisfied that this opinion is correct, because the spirit of every language is the same, just as the essence of all kinds of music is alike; that is, the laws or principles of music and of language rule universally, and are constant: they are only modified in different nations by modifications in their organs, and dissimilar combinations of these in each."‡

Now, if the statement be quite true, that "some men readily acquire its words without catching the spirit of a language," there can be no ground for the opinion, "that the spirit of every language is the same." It appears to me as an inevitable conclusion, that, if "the spirit of every language is the same," all who can acquire the words of another language will, in practically knowing, as all men do, the spirit of their native language, know also the spirit of every other language.

* Philosophical Principles of Phrenology, by Spurzheim, p. 24.

† Spurzheim's Phrenology, p. 287. 4th edit. 1833.

‡ Spurzheim, id., p. 288.

The preceding paragraph is written to exhibit the confusion which Spurzheim introduced by adopting the term "spirit of language" in more significations than one. He adopts it in at least two different senses:—It means, *1st*, a something which he deems peculiar to a language; and, *2dly*, a something which he deems common to all languages.

I proceed to illustrate this criticism on Spurzheim:—
"The languages of different nations present fine examples of modifications produced by the mutual influence of the faculties. I even admit, as a principle, that the spirit of its language proclaims the predominating faculties of a nation. I have spoken of a faculty which learns and knows the signs invented by the superior intellectual faculties to express the feelings and ideas. It is evident, therefore, that a nation with many feelings or ideas must have many signs, and that the number of any one kind of these indicates the energy of the faculty they represent. Thus, the Greek and French languages have a greater number of tenses than the German and English. The French, on the contrary, is poor in expressions of reflection and of sentiment; moreover, it has few that are figurative; while the German is rich in all of these, and has also many more signs of disjunction. Frenchmen have the organs of Individuality and Eventuality very much developed, and are, therefore, fond of facts; but their faculties (organs) of Comparison and Causality are commonly smaller."* The term "spirit of language" is adopted here to designate the class of words which abounds in a language. The German abounds in words which name reflections, judgments, reasonings, &c.; while the French lacks these, but abounds in words which name individual objects without reference to other objects. Thus the spirit of the German language consists in its wealth of that class of words which express the results of reflection. The spirit of the French consists in its poverty of that class of words, and in its wealth of the class of individual terms. In this sense, each language has its own spirit. In this sense, however, it appears to me that a man who possesses a good memory for words, must, with the acquisition of the words of another language, acquire also its spirit.

Dr Spurzheim adopts the phrase, "spirit of language," in another sense, as something which is peculiar to a given language. "The construction of languages proves also the modified manner of thinking of different nations. The

* Spurzheim's *Philosophical Principles of Phrenology*, p. 159.

French like facts, and direct their attention to them, without first considering causes. It is natural, indeed, to begin with the subject; then to join the action of the subject; and, after this, to express other circumstances. This the French do regularly. If cause and effect be considered, they always begin with the effect, and relate the cause afterwards. The Germans proceed in a very different manner, and their tongue, in this respect, requires much more attention than the French. It also ordinarily begins with the subject; then follow expressions of the relation between subject and object, both of which are mentioned; and, lastly, the action of the subject upon the object is considered. If an effect and its cause, again, are spoken of, the cause is commonly denoted first, and the effect after it. Certain languages are known to admit of a great number of inversions, others of very few. The former appear to me the more logical; for it seems natural that attention should be given first to the most important object. The French language begins almost always with the fact; hence French understandings consider the fact as the more important.

“From these observations upon language, we may conceive that the spirit of no *one* language can become general. I am of opinion that the spirit of the French will never please Germans; and that Frenchmen, on the other hand, will always dislike that of the German; because the manner of thinking, and the enchainment of ideas, are quite dissimilar in the two nations.”*

The above remarks of Dr Spurzheim are not on language, as he deemed them to be, but on thought. He is not discussing the construction of language, which is its syntax, but is discussing the relative value in which the several parts of logical propositions are estimated by the French and Germans respectively. The order in which the several parts of logical propositions, arguments, &c., are commonly stated in the literature of a nation, may indicate a part of that nation's intellectual character. But to consider such order of sequence as the spirit of the language of a nation, or even at all connected with its language, as language, is to confuse language and thought.

It is quite true, that the French commonly state the subject of a proposition before its predicate; and the English do so likewise. Shall we, therefore, assert, that the spirit of the two languages is one and the same? In these two, as in other, languages, propositions may be stated in an invert-

* Spurzheim's *Philosophical Principles of Phrenology*, p. 161.

ed order, so as to meet the demands of emphatic declarations; as in the example—"Great is Diana of the Ephesians!" which is an exact equivalent of the Greek, *Μεγάλη ἡ Ἀρτέμις Ἐφεσίων*. Le Clerc justly falls under the Archbishop of Dublin's censure for rendering the passage, "La Diane des Ephesiens est une grande Deesse!"* The Paris edition of 1805 exactly renders the Greek, "Grande est la Diane des Ephesiens!"

The peculiar arrangement of the distinct parts of propositions by a nation, therefore, cannot be deemed the spirit of its language. There is another arrangement, however, which, although it may be difficult to detach from the logical, yet has an independent existence—viz., the grammatical arrangement of words. The places of adjectives in relation to substantives, of adverbs to verbs, of particles to the words which they govern or modify, form a mass of peculiarities in each language, which belong to each, as language. The doctrine of these peculiarities is named Syntax. It would be a great advance in precision of nomenclature, if grammarians would treat of the verbal expression of the several parts of logical propositions, arguments, &c., under the term, Logical Syntax. Professor Lee, in effect, makes the distinction, by treating of the expression of logical propositions, before entering upon the Hebrew syntax.† He makes the distinction also in his tract on the Persian Syntax, in which, after treating of the syntax of nouns, he devotes an entire section to the separate treatment of logical propositions, before entering upon the syntax of verbs.‡

There is another, making a third, sense, in which Dr Spurzheim adopts the phrase, "spirit of language." It designates a something which is common to all languages. "The law of words constitutes the spirit of language. I am satisfied that this opinion is correct, because the spirit of every language is the same."§ Dr Spurzheim has not stated what he means by the law of words; and, after much investigation of his writings, I am unable to discover his meaning, and, therefore, cannot state what this something is, which he declares to be common to all languages, and to constitute the spirit of language.

* Whately's Rhetoric, 4th edit., p. 297.

† Lee's Hebrew Grammar, Lect. 14, 15. 3d edit. 1841.

‡ Sir W. Jones' Persian Grammar. Edited by Professor Lee. 9th edit. 1828, p. 112. The whole tract on Syntax is by Dr Lee, which he substituted for the less copious one of Sir W. Jones.—See Editor's Preface, p. xiv.

§ Spurzheim's Phrenology, p. 288. 4th edit. 1833.

Linguists adopt the term "spirit of language," to signify the sum-total of the peculiarities in any given language. The peculiarities of a language are ranged under the familiar heads of Orthography, Etymology, Syntax, and Prosody. They adopt the term "genius of language," as synonymous with spirit of language. Thus each language has its own genius.

Philologers indicate the relative number of words in a language, by describing it as rich, full, inexhaustible—as the German; or poor, meagre, &c., as the French. This, however, is not deemed a part of the genius of the language; and, accurately speaking, it is not; for it is no part of the orthography, etymology, &c., of the language.

It appears that languages are similar to each other in three respects, viz. :—

1. Each language is a system of names for objects, events, relations, &c.

2. The original physical meaning of words became extended to the moral (as illustrated in the word *rise*,*) by tropes and other figures, and by elliptical-expressions, in which a tone of voice or a gesture supplied the ellipsis.

3. The formation of compound words, by coalescing two or more words, or parts of words, into one.

A language is a system of names for objects, events, relations, &c. Hence the language of a nation indicates the knowledge, habits, civilization, &c., of the nation at any given period; and is, therefore, as certain a guide to the historian, to interpret the mental condition of the nation at its various epochs, as the fossils found in the several strata of the earth are to the geologist, to interpret the concurrent physical and physiological conditions of the earth's surface at its various epochs.

In this paper I have shewn, that Gall's facts and reasonings are inadequate to establish his organ of Philology; that the talent for philology cannot be the result or function of any one organ; that the organ of Verbal Memory is sufficient to confer the talent to acquire foreign languages; that one sense in which Dr Spurzheim adopts the term "spirit of language," has nothing to do with the spirit, but only with the richness, of a language; that another sense in which he adopts the term has reference, not to language, but to thought; and that the third sense in which he adopts the term is not defined: and some remarks on language are added.

* Phrenological Journal, vol. xvii., p. 151.

(*To be concluded in next Number.*)

IV. *A Visit to Dr Ferrarese of Naples.* By GEORGE COMBE.

Dr Luigi Ferrarese, of Naples, is favourably known to the public as the author of a work on Phrenology, published by him several years ago, and as formerly physician in ordinary to the Government Lunatic Asylum at Aversa, near Naples. Happening to be in Naples in March 1844, I resolved to pay him a visit. At first I experienced some difficulty in discovering the place of his residence, but at length a friend ascertained that he lived in No. 1 Strada Confalone alla Salute, an obscure street; and there I found him in circumstances which indicated much depression, both physical and mental. He spoke with interest of Phrenology, and said that he had projected a Phrenological Journal, but knew that he would be stopped by the Government. He wished to shew the importance of the science in insanity, criminal legislation, education, and social arrangements; but in Naples there was no outlet for knowledge. Altogether, I have never had an interview with any phrenologist, foreign or British, who excited so strong a feeling of sympathy and regret, mingled with respect for his intellectual acquirements, as did Dr Ferrarese.

He was much interested by the account which I gave him of the progress of Phrenology, and promised to visit me on an early day at our lodgings. He accordingly did so, and presented me with a number of books, his own works. He called a second time, an altered man in his whole appearance. He had no longer the neglected aspect which had formerly struck me; the expression of his countenance was much more cheerful; in short, I saw before me a surprising metamorphosis. In the course of conversation, the cause of his former, and, I fear, ordinary appearance, transpired. On 10th February 1839, he commenced a periodical, named "*Il Gatto Letterato, Foglio periodico*," dated in Capolago (a town in Italian Switzerland), but printed at Naples (without licence); and for a "*Lettera di un Frenologo ad un Dottore degli Stati Pontifici*" ("Letter from a Phrenologist to a Doctor in the Papal States"), he was called before the *Santa Sede* (Holy Tribunal); and afterwards, in 1840, for several other articles, he was seized and imprisoned for 28 days. He was suspended from his office of physician in ordinary to the Royal Lunatic Asylum at Aversa, and crushed to the earth by every engine of persecution which bigotry and tyranny, combined, could employ against him. This accounts

for the condition in which I found him. He added, that the more he had been persecuted, the more ardently had he clung to Phrenology and science, and the more clearly did he perceive the importance to mankind of diffusing a knowledge of them. I asked him whether it would do him any injury, if I published in England an account of his persecutions: and he said, No; that he had mentioned them in one of his own prefaces.

Two days later, Dr Ferrarese spent the evening with us. I asked him whether he was not imprisoned for printing without a licence, rather than for the opinions which he had expressed. He said, "For the opinions alone. The censorship," he continued, "is avoided here extensively, by printing in Naples, and putting the name of a foreign place of publication on the title-page." Many of his works have been so printed. They cannot be advertised, or sold publicly, but privately they obtain a wide circulation.

He was introduced to the Grand Duke of Tuscany, and had some conversation with him. The Grand Duke told him that, with his opinions, no place in Italy was safe for him, and that he should go to London or Philadelphia. "How can I go?" said Ferrarese. "I have a family depending on me, and am without the means of moving even from Naples. My circumstances are most straitened; but I prefer enduring all rather than give up my freedom of thought. If I had chosen to praise existing men, and their opinions, institutions, and practices, I might have been living in luxury, and driving my carriage." He mentioned that, two years before, in going home at night, he had been stabbed in the neck, first on one side, and next moment on the other: on the left side, the wound was within a hair's breadth of the carotid artery. Since that time, he had always had an armed man to attend him in walking out at night; and this evening, his attendant had been waiting for him during his whole visit.

I endeavoured to learn the reputation which he bore among the medical profession in Naples; and the report was, that he wrote so severely, that he had alienated his friends. To those who know the very low state of medical education in the Neapolitan dominions; who know also that a physician, however talented, wealthy, and respectable, is not received at court, or admitted into aristocratic society; and that, in consequence, the manners, morals, skill, science, and attainments of the mass of the medical profession present innumerable points for condemnation, there will appear small cause for surprise, that an enlightened man, of Ferrarese's cast of mind, should write against them with severity. Nothing

reached me against his character. He mentioned that his nervous system is so excitable, as to forbid him the use of all but the smallest quantity of the weak country wine largely diluted with water, and that he could not venture on drinking more than half a cup of tea. These facts tend to confirm the impression that his depressed circumstances owe their origin to his opinions, and not to moral deficiencies.

He shewed me some proof-sheets of the second edition of the second volume of his work on Insanity, which is revised by the censor, approved of, and allowed to be published.

The following is an extract from the "Letter from a Phrenologist to a Doctor of the Pontifical States," which gave rise to his being brought before the "Holy Tribunal." "I received the favour of your letter of 8th December 1838, in which you complain of me for having, in general terms, treated severely the enemies of Phrenology. Believe me, dear friend, that I have said of them only a little part of what they deserved. They are, in general, vile hypocrites, who, being unable by other means to prevent the rapid progress of a philosophy belonging to an enlightened age, and to modern civilization, resort to the arms of a spiritual doctrine and a spiritual power to protect themselves from the consequences of a contest with men of science on scientific grounds." He proceeds to mention, that they assail the phrenologists with the authorities of the great fathers of the Church, such as St Augustin and St Thomas Aquinas; of the holy council; and of the Bible; and invoke ruin on the poor devils who venture to maintain the cause of truth. The letter is severe, and, in his circumstances, not very prudent; but it contains the boiling over of the feelings of an enlightened and patriotic mind, borne down by persecuting power, and by the midnight darkness and ignorance of his countrymen.

I subjoin a list of his works which I have brought home with me, and which are pervaded by Phrenology and its applications. I found him acquainted with almost all that had been written on the science in France, Italy, and Britain.

Programma di Psicologia Medico-Forense. 8vo, pp. 40. Napoli, 1834.

Trattato della Monomania Suicida. 8vo, pp. 97. Napoli, 1835.

Riflessioni sullo Asiatico Morbo Colera. 8vo, pp. 48. Napoli, 1837.

Ricerche intorno all' origine dell' Istinto. 8vo, pp. 45. Napoli, 1838.

Memorie riguardanti la dottrina Frenologica. 8vo,

- pp. 164. Napoli, 1838. With an appendix, "Frenologia Applicata." 8vo, pp. 24. Geneva, 1841.
- Allocuzioni Critiche su'l Moderno Eccleticismo. 8vo, pp. 408. Italia, 1838. (This is a discussion of Cousin's Philosophy, which he attacks.)
- Annali di Osservazioni Cliniche. Vol. i. 8vo, pp. 60. Napoli, 1839.
- Il Gatto Letterato. A periodical, 8vo, pp. 244. Capolago, 1839.
- L'Aristarco Giornale di Scienze, Lettera, e Arti. 8vo, pp. 72. Capolago, 1840.
- Programma dell' Analisi Filosofica delle Pene. 8vo, pp. 12. 1839.
- Annali di Cliniche Osservazioni per le R. R. Case dei folli di Aversa. Vol. i. 8vo, pp. 120. 1840.
- Delle Malattie della Mente, (second edition). 8vo, pp. 342. Napoli, 1841. Vol. i.
- Dissertazioni sulla Follia. (Appendix to the "Trattato delle Malattie della Mente"). 8vo, pp. 82. Napoli, 1840.
- Delle Malattie della Mente. 8vo, vol. iii. 1843.
- Quistioni Medico-legali, intorno alle diverse specie di Follie, 8vo. Napoli, 1843. (This and the three preceding publications are portions of one work).

V. *Letter to the Editor of the Phrenological Journal on the Measurement of Heads.* By Mr HENRY G. ATKINSON.

SIR,—In the last (81st) number of your Journal, p. 370, Mr Donovan has called the attention of your readers to the measurement of heads, and accuses me of over-estimating (in a paper on an idiot family in the *Zoist*) the size of well-developed heads, not being aware that my measurements were taken from the casts. And as I conceive that errors must continually arise from confounding the size of heads with measurements taken from casts, I shall beg permission to make a few remarks upon the subject. A cast of an ordinary-sized head measures about an inch more in the greatest circumference over the parental feeling and perceptive faculties than the actual head, and the other measurements vary, of course, in proportion. And if a mould be taken from a cast, the impression from this will be again increased to the like extent; and thus the cast from every fresh mould would be an inch larger in circumference than the former. But as fresh moulds, when required, are mostly taken, or should be,

from original casts, they may be multiplied to any extent, and only exceed nature two inches in the widest circumference, or one inch beyond the original cast. It should always, therefore, be understood in giving measurements, whether they are taken from the actual head, or from a first or second cast. The full average circumference of the original cast of a well-developed head, I consider to be 24 inches; deducting an inch for the swelling of the plaster, this would shew the real head to have been 23, which I do not consider to be an over-estimate; for I have compared the measurements of a great number of casts in my possession: that of Coleridge even measures 25 inches. Of course it would be more satisfactory, were it possible, to have had the heads to compare. The only two I have had the opportunity of comparing with the casts are Dr Engledue's and my own, and both measure 23 on the head and 24 on the cast, and therefore I think I am fully justified in drawing the conclusion which I have. I am willing to admit that a head of 21 or 22 inches may in general, perhaps, be as powerful as one of larger dimensions, after a certain development; the power depending more on proportion, temperament, and constitution, than absolute size of the head, though, all conditions being in harmony and equal, size is, of course, a measure of power. We are told that Gall's head measured 22 inches in the largest circumference; and it would almost seem that this circumstance had influenced his estimate of the size of heads,* for he says, in his second volume (page 220 of the Boston translation), "As we come to brains of greater magnitude, we perceive the intellectual faculties increase in extent, until we find heads 21 or 22 inches in circumference; a limit at which man attains his maximum of intelligence." So that according to Gall the maximum of intelligence is 22.† I presume that by intelligence Gall means power. But according to my estimate, and I am borne out by the facts before me, the limit should extend at least to 23 and 24.‡

* A rash and uncharitable surmise! See our next remark.—ED.

† The fact is, that Gall uses the old French inch (*pouce*), and his translators have omitted to note that 22 French inches are equal to about 23½ English. The old French foot contains 12·7893 English inches.—ED.

‡ In the course of our experience, heads above 23½ inches in circumference have been but rarely met with; 22½ inches is so common, that we consider this a fair or average size in the middle and upper ranks of life. In measuring the circumference of heads, the quantity of hair should be allowed for; and it should be remembered, that the thickness of the skull and its integuments is greater in some persons than in others. Again, it is only mental power, in general, but not *intellectual* in particular, that is influenced by the general size of the head. It may hap-

Mr Combe in his *System*, vol. i., page 40, gives 22 inches to a full-sized head, and says, that so large was the head of Spurzheim, that even on the skull this measurement was $22\frac{1}{2}$; and, therefore, we may suppose that the head complete would measure 23. And yet I think that none will venture to compare the intellectual power of Spurzheim with that of Gall. There is power in every line of Gall; but to my mind there is such a want of force, and grasp of intellect, in the writings of Spurzheim, that I never could read them with the least satisfaction. I consider, therefore, that the size and proportion of particular parts, in conjunction with a superior temperament and constitution, are of far more consequence than the size of the entire development. Indeed, except in a very general way, I have not yet seen any useful result from the great pains which is so frequently taken with the measurements of heads. At all events, let us remember that the cast is not the same as the head, and that the difference may vary according to the thickness and nature of the plaster, in the whole or in particular parts; so that we find casts to differ very much from the head, and from each other, according as they have been taken by different casters, or from different moulds. Yours, &c.

HENRY G. ATKINSON.

18 UPPER GLOUCESTER PLACE, LONDON,
20th November 1844.

VI. *Rejoinder to Mr Prideaux's Article on Phreno-Mesmerism published in last Number of the Phrenological Journal.* By Mr W. R. LOWE.

In offering a few more remarks upon Mr Prideaux's views respecting Phreno-Mesmerism, I intend to be very brief. My criticism on that gentleman's paper "On the Fallacies of Phreno-Mesmerism" was certainly written under the idea that he considered the operator's volition an agent adequate to the production of all the phenomena which the phrenomesmerists have observed; my *object*, therefore, in replying was,—not to establish Phreno-Mesmerism, so much as to shew that (what I conceived to be) Mr Prideaux's theory of Volition was, at all events, insufficient for the purpose proposed. In this respect, however, it appears that I had the

pen, for instance, that a very intellectual man has a very small organ of Philoprogenitiveness, and this circumstance may diminish by one or two inches the peripheral measurement of his head.—ED.

misfortune to misunderstand him; for, as he *now* states, "he only introduced this question incidentally, and as subordinate to the main question at issue." Now, however much I may regret having misunderstood Mr Prideaux, I feel bound to state, that, after a careful re-perusal of his article, I still think that, however unintentionally, the doctrine that "volition was adequate to explain all the phenomena of Mesmerism," was therein decidedly inculcated, and, if not expressly stated in so many words, was at least unequivocally taught by implication. What other construction, for example, can be put upon such a passage as the following? "My own experience on the subject has tended to impress me with the belief, that volition is the Alpha and Omega of Mesmerism, and that, *cæteris paribus*, the effect produced is always in relation to the exertion of will employed."—P. 161. Nor is this an isolated expression of his belief; for we find it reiterated in the following page, where, in referring to Dr Elliotson, it is observed, "The results which have attended his (Dr E.'s) practice of Mesmerism, far from militating against the theory of the essentiality of *volition*, actually tend to confirm it, being, in fact, corroborative of the law previously enunciated, that, *cæteris paribus*, in mesmeric operations, the effect produced is in relation to the exertion of *will* employed," &c.—P. 162. And, to quote one other example; on the very next page, after suggesting a possible mode of transmission of the exciting influence to the organs, he sums up the matter thus: "But how far this is a more probable explanation of the phenomena which actually take place, than that which refers them to volition, an agent *known* to be sufficient to produce them independently of any manipulation, I shall leave to my readers." I also shall "leave it to my readers" to say whether these passages, (unless taken in, what the Oxonians would call, a very *non-natural sense*.) do or do not justify the construction which I put upon them; and shall console myself with the recollection, that, if I have misunderstood the essay in question, a similar obtuseness of perception is also shared by *every phrenologist of my acquaintance* who has perused the article. It is quite true that, in one or two instances, Mr Prideaux speaks of sympathy as being concerned in mesmeric operations, (though when he says "*on every occasion*" surely his memory must be treacherous: witness, for instance, not only the passages already quoted, in which, as in the three entire pages from which they are taken, there is not the most remote hint of any other agent than volition being employed; but also p. 160, where volition and local excitement by con-

tact are placed in juxtaposition, without allusion to the probable agency of any other cause); but interpreting Mr Prideaux by Mr Prideaux himself, I naturally inferred, that when sympathy was spoken of, it was mentioned as synonymous with volition, or that, at least, the two stood in the relation of cause and effect, the one necessarily involving the existence of the other—for how could an operator's volitions be obeyed, unless there pre-existed a sympathy or mental relationship on the part of the patient, which allowed the mandates of the one mind to be transferred to the other? Professor Gregory appears to have considered sympathy and volition in the same light as myself, stating (in this Journal for October last, p. 384) that, "in fact, these two theories are essentially the same, sympathy being indispensable to both." I would therefore respectfully suggest to Mr Prideaux, whether the mistake into which I (with so many other phrenologists) have fallen respecting his views, should not be debited to the account of the writer, rather than to that of the readers, of the essay.

But without further comment on this subject—whatever Mr Prideaux may have thought, or intended his essay to convey, we have now his distinct admission that he does not consider volition "adequate to explain all the phenomena of Mesmerism," and this is nearly all that I contended for; indeed, had this opinion been as unequivocally expressed in the first essay as in the second, my criticisms would never have been penned, for, that there are many sources of fallacy, unless carefully guarded against, I readily admit; and my chief object (as already stated) was only to establish Phreno-Mesmerism *collaterally*, by shewing the inadequacy of volition to explain much that has been observed. No one certainly would assert, "Volition being proved insufficient, *ergo* Phreno-Mesmerism is a truth;" yet, when only two theories are presented for discussion, and the insufficiency of *one* to account for a large portion of the phenomena is proved, we have, to a certain extent at least, *negative* evidence in favour of the *other*. Not that I am prepared or anxious to prove that volition is never concerned in mesmeric phenomena; on the contrary, I believe that in many cases it really is, though I have never personally witnessed any phenomena fairly attributable to it: but it appears to me, that frequently both volition, and local cerebral excitement, may be agents at work, and that the existence of the one is not necessarily incompatible with that of the other.* Mr Prideaux and myself,

* In like manner, I believe, from having witnessed many of Mr Braid's

then, approximate much more closely than we appeared to do at first ; for, while I readily admit that volition may be frequently an active agent in the matter, Mr Prideaux also admits its incapacity (or at least will not maintain its adequacy) to explain all.

It is not my intention to follow Mr Prideaux through the whole of his elaborate article ; this indeed is quite unnecessary, now that he has disavowed what I chiefly contended against, viz., the belief (to use his own words) " that volition is the Alpha and Omega of Mesmerism." There are, however, one or two passages to which I may very briefly advert. At p. 16, for instance, in referring to a former article of mine on " Mr Spencer Hall and ' the new organs ' " (vol. xvii. p. 8), he speaks of certain facts having occurred in my own experience, but states that I now " seem disposed to abandon the conclusions which I once drew from them." He then cites one or two passages from the article in question, but does not even *attempt* to quote any antagonistic passages from my subsequent article, or to state what ideas I have put forth indicative of the slightest disposition to abandon my former opinions. If he will again refer to the former of those articles, he will see that its whole tone and tenor were anything but positive and dogmatical ;—that I detailed some of my own experiments which *appeared undoubtedly* to point to the conclusions there drawn from them ; but at the same time expressly stated, *more than once*, that " further investigation must determine" their correctness ;—that, in fact, my object was *not to establish* the new organs, so much as to stimulate other phrenologists to make similar experiments, and record their results, in order to avoid that most common of all errors in philosophical investigation,—a too hasty generalization from insufficiently observed facts. In the next Journal, it is true, Mr Brindley published some experiments, the results of which were at variance with my own, as far as the suggested subdivisions of the organs were concerned, though according with them in other respects ; and Mr Prideaux waxes warm because I have merely expressed, in reference to these cases, the hope that such experiments may be multiplied and recorded by various operators. What more does Mr Prideaux think that that article requires from me ? That extreme caution is required in conducting these experiments, every one must admit ; and that Mr Brindley used due care and caution, of course I am bound to believe :

cases, that that gentleman's theory of suggestion and automatic muscular action is true in many instances, but is not at all applicable to others.

but we know that some of the *established* organs cannot always be excited in particular cases (Dr Elliotson, for instance, can excite only four organs in some of his patients, and six in others ; and I have frequently found that small organs can with difficulty, and sometimes not at all, be brought into action); therefore, I can scarcely give up my previous opinions on account of the isolated case recorded by Mr Brindley. If, however, on a *careful and extensive investigation* of cases, it turn out that the subdivisions of the present organs be not established, *then* indeed shall I be most anxious "to abandon the conclusions which I once drew from" my experiments; and shall rejoice that the increased difficulty in practical Phrenology, which I have so much feared as likely to arise from the multiplication of organs, will not be interposed.

I do not again advert to Mr Prideaux's objection, that phrenological manifestations were never elicited until recently (an objection taken by Mr Colquhoun in nearly the same words, long before Mr Prideaux's article appeared); nor to the circumstances attending the discovery of Phreno-Mesmerism; because these points have been now fairly brought before the readers of this Journal, who will each for himself judge of the balance of probabilities, and come to his own conclusions accordingly. Nor do I think it requisite to occupy any space here in examining the hypothetical explanations given by Mr Prideaux (many of which appear to me "far more ingenious than probable"), of the cases quoted in my last paper, inasmuch as Mr Prideaux has not even *attempted* to solve them by the theory of volition, and to this (supposing it to be held by him), and to this alone, were they directed. Had my object been to establish Phreno-Mesmerism by *positive evidence*, other and different cases would have been selected in preference.

One observation, however, at p. 25, I really cannot help just noticing in passing. Mr Prideaux refers to a passage in which I spoke of a gentleman, "who, from an unfortunate defect of vision, could not observe the precise point of the cranium that was touched, but merely watched the manifestations;" and considers the defect of vision "unfortunate in more senses than one." Mr Prideaux's comment upon it, however, I consider more unfortunate still; for to assert that *because* a gentleman standing a short distance off, could not observe "*the precise point*" of a head that was touched, he *therefore* could not see the pantomimic gestures which ensued upon that contact (to say nothing about the ears remaining open to any exclamations that were uttered), is a

non-sequitur which I should scarcely have expected from Mr Prideaux.*

Before quitting this subject, I would only observe further that, in the present state of our knowledge of it, we are scarcely in a position to theorize extensively; indeed, theorizing at all, until very numerous facts have been observed, and carefully classified and elaborated, can only lead to "conclusions in which nothing is concluded;" and for my own part, I should not have been found thus early in the field as a theorist, but that, from misunderstanding Mr Prideaux's *real* views, I was led to consider that gentleman's fondness for the theory of volition, as giving rise to a very exaggerated idea of its capacity to explain the phenomena observed.*

WOLVERHAMPTON, 21st February 1845.

II. CASES AND FACTS.

I. *Case of Derangement of the Faculty of Language, without apparent disease in the anterior lobes of the Brain.* By ALEXANDER KILGOUR, M.D., Aberdeen.

On 30th June 1841 I examined the brain of Mrs Sherrat, aged 39, who had lately been a patient in St Mary's Ward. The skull was found of ordinary thickness; the dura mater healthy on the external surface. On raising this membrane, the right side of the brain appeared natural over its whole extent. The anterior and middle lobes of the left side were also healthy; but on the posterior lobe, about its middle portion, there was a manifest elevation and projection, somewhat resembling a tumor, but the apex was broken and rugged from part of the brain adhering to the dura mater, and having been torn in raising the latter. The substance of the brain here felt soft to the finger. A section of both hemispheres, on a level with the great commissure, exhibited the right hemisphere smaller than the left, the increase of size in the latter being chiefly in its posterior lobe. A little clear serum was contained in the lateral ventricles. The projecting portion of the posterior lobe of the left side contained some soft red clots of blood, and a little bloody sanies ran from it when cut. A section of it laid open an irregular cavity, or rather a soft semi-fluid mass of a yellow tint or

* This controversy, which has been ably and temperately conducted on both sides, may now, we think, be looked upon as finished.—ED.

colour, extending into and destroying the posterior and inferior cornua of the lateral ventricle, so that the separate parts in the latter cornu could not be distinguished. The thalamus at its posterior end was of a lemon colour, and slightly softened. The right hemisphere was remarkably firm; and in the left hemisphere all the other parts were natural.

This patient, when in the Hospital, had the following symptoms. She complained of pain in her head, and, as she said, "all over it;" but she was not until a few days before her death confined to bed. She complained of a feeling of choking in the throat, much like that in hysterics; but could swallow quite well. She did not complain of a pain in any one spot of her head. The most remarkable symptom was a loss of power to remember, or, at any rate, to utter names or nouns. She could use verbs, but for the noun she always used *it*. When the noun, in any case, was pronounced to her, she comprehended it at once, and repeated it several times very quickly, as if to fix it in her mind; but in a few minutes it was again forgotten, and she now made use, in reference to the noun, of the term *it*,—saying, "It was it," or, "It was yon." She was evidently very sensible of this deficiency, and vexed about it; more especially as she often could not get what she wanted, in consequence of her not being able to say what she desired. She had no paralysis of any of the limbs or of the tongue, and all her senses were perfect. She seemed to think that the choking sensation arose from her tongue being too large for her mouth; when protruded, it did not incline to either side. She was twice cupped, but seemed worse after this. She was also blistered over the head, and before leaving the Hospital a seton was put into the nape of her neck. After a dose of oil of turpentine she was nearly a day comatose. She had occasional retching or vomiting, especially after the turpentine. On two days she had slight convulsive movements of her arms. Her pulse was on two occasions above 90, but this did not last. Towards the end of the disease the bowels became very costive. Five weeks ago she awakened one night screaming, from pain of her head, and her husband thought she was out of her senses. He says she had been complaining of headach for nine months previous to the night referred to; and that he noticed the imperfection of her speech the day following the night on which she complained so much.

REMARKS BY THE EDITOR.—We were not surprised at the

faculty of Language being affected, although no disease could be traced in the structure of the organ; because it is a well-known fact that our knowledge of the minute structure of the nervous system is still too imperfect to enable even the most skilful anatomists *always* to detect morbid appearances, even when reason tells them that morbid changes *must* have taken place. Greater uniformity, however, should be expected between morbid structure and morbid manifestations, where the former is strikingly apparent and extensive; and, accordingly, we are led to suspect imperfect observation of the mental manifestations where no changes in them are reported as concomitant with extensive cerebral disease. Impressed with this conviction, we sent a proof-sheet of the foregoing article to Dr Kilgour, referred him to the similar case reported in vol. x., p. 352, of this Journal, and requested farther information. In a letter dated Aberdeen, 17th March 1845, after re-assuring us that no structural changes could be detected anterior to the thalamus, he adds,—"I would be inclined to say, that the chief seat of disease was the organ of Combativeness; but I speak as one who never had time, or perhaps inclination, to become practically acquainted with the organs. Certain it is, that, as in the case to which you refer, which I read to-day in the *Phrenological Journal*, her temper was changed, and Dr Dyce (who attended her) tells me that he remembers well that she had a great aversion and antipathy to her relations (where they reside we cannot now learn), but she was not any thing like insane or foolish." She was a patient in the Infirmary of Aberdeen; and Dr Kilgour, at the request of his colleague Dr Dyce, several times saw her, and was present with him at the *post mortem* examination.

In vol. xvi., p. 278, we remarked on the unsatisfactoriness of pathological cases reported in the present state of anatomical and psychological knowledge and observation, "whether seeming to confirm or disprove the received function of any part of the brain, when considered as *evidence* of the truth or falseness of Phrenology;" and concluded that, "accordingly, it is by the *physiological* evidence that Phrenology must stand or fall." Two opposite cases were given as illustrations; and we now add the following (reported by Professor Luigi del Punta), as a contrast to that now published by Dr Kilgour. It is translated from the "*Österreichische medicinische Wochenschrift*," No. 40, published in Vienna on 28th September 1844, which quotes it from *Gazz. Toscan. delle scienze med. fisiche e l'Expérience*, 1844, No. 370:—

"A girl of about eleven years of age, who suffered from

tubercles in the lungs and mesentery, began, during her stay in the hospital, to complain of heaviness, pressure, and uneasiness, in the region of the forehead. Her speech became slow, and her intellectual faculties, which were above the common standard, constantly diminished. Every noise, and the most moderate degree of light, became insupportable. The difficulty of speaking soon attained to such a height that, in spite of her utmost endeavours, she could not bring forth a word. She seemed to have lost the ability to combine sounds. Her voice was rough and without modulation. The delirium, at first periodical, became unintermittent. In her last moments, she suffered also from nymphomania; and her voice continued to the close of her life hoarse and rough.

“The examination of her body disclosed traces of an extensive *meningitis* (inflammation of the membranes of the brain), especially of the *pia mater*. The cerebellum had evidently been the seat of inflammation. The *choroid plexus* of both lateral ventricles was swelled, and they contained a little whitish serum. Towards the lower portion of the left hemisphere, where, according to Gall, the organ of Language is placed, there was found a tubercle *in stadio cruditatis* of the size of a pigeon’s egg.”

As remarked in vol. xvi., p. 278, contradictory cases like the foregoing are found in other parts of the body besides the brain. To illustrate this farther, we may adduce a case reported by Dr John Webster in the 26th volume of the *Medico-Chirurgical Transactions*, and of which the following abstract is given in the *British and Foreign Medical Review*, October 1844, p. 364. “The patient, a gentleman, *ætat.* thirty-six, was for many months utterly unable to move, by voluntary effort, any muscle below the neck, excepting the diaphragm; while sensation remained perfect over the entire surface of the body, and the intellectual faculties and other senses continued unimpaired until death. The progress of the case was very slow, the disease advancing gradually to its climax; and the patient suffered much at times from convulsive spasms in the lower extremities. He had also occasional epileptic fits. The cuticular secretion was entirely suspended. The muscles of deglutition were unaffected throughout. On examination after death, no very remarkable appearances were detected in the cranium. The spinal theca, corresponding to the three or four lower cervical vertebræ, was much distended; and, on being cut into, the arachnoid cavity and sub-arachnoid tissue were found filled with lymph, which united the membranes to each other and to the cord, the

adhesions being most firm on the anterior aspect. At this part the medulla was much diseased. Professor Todd of King's College examined this portion, and reports as follows: 'I find great destruction (from softening) of the medullary substance of the posterior columns, especially that of the right side; the antero-lateral columns seem to have been also the seat of the softening process to a less degree, but I do not find that they have suffered any loss of substance. In examining the softened parts by the microscope, I detected very few of the proper nerve-tubes; and those which I did observe were much altered from their natural appearance; they had become opaque, and had assumed an indistinctly fibrous aspect. I was unable to find any trace of gray matter.' The posterior roots of the nerves were unaffected. The preparation, it should be stated, had been preserved some time in spirits, before this examination was made by Dr Todd." On this the reviewer observes,—“It is needless to say how perplexing are morbid changes like these, when taken in connexion with the symptoms manifested during life. We remember a case that was brought under our notice some few years ago, the symptoms of which were precisely the converse of the above, viz. the persistence of voluntary motion, with the almost entire loss of sensation; and yet in this instance the morbid appearances were not very dissimilar. The gray matter was altogether destroyed, the interior of the spinal cord (in the lower cervical and upper dorsal regions) being converted into a cream-like substance. Verily, there are mysteries in these things, which our philosophy has not yet unravelled.”

All this should make phrenologists cautious of founding too much on pathological cases; and, on the other hand, should prevent the ascription of too much weight to morbid cases that apparently are hostile to their conclusions. However puzzling appearances may sometimes be, we confide in the uniformity of nature, and expect that an improved pathology will, in the end, reconcile all seeming contradictions.

II. *On the Heads and Intellectual Qualities of Sir Isaac Newton and Lord Bacon.*

TO THE EDITOR.

SIR,—In the physiological lecture annually delivered by the various teachers of the department of medical knowledge in London, Phrenology is discussed either with favour or with hostility. One of the most eminent of these gentlemen, opposed to the science, is in the habit of selecting the cere-

bral development of Sir I. Newton, as one in which the indications of Phrenology are by no means sufficient to explain the extraordinary powers of that remarkable man. He is in the habit of saying that Bacon's head, no doubt, exhibits in the fullest splendour the phrenological indications of intellectual endowment; but that the cerebral conformation of Newton, though certainly good, is quite insufficient to explain his "stupendous" powers.

These remarks are generally addressed to a large class of young men, little solicitous about metaphysical distinctions, and only eager to retain as many of the facts enunciated by the professor as possible. Now, Sir, it is to young men,—the rising generation of literature and science,—that Phrenology must look for friends or opponents; and it is therefore advisable that the fallacy of the illustration should be shewn, and the perfect agreement of the phrenological indications with the character of the man demonstrated.

It will hardly be disputed that the character of Bacon was on a much grander scale than that of Newton. Of the former it has been well said that his imagination, reason, and memory, were all extraordinary; he had the imagination of a poet, with the memory and judgment of a high priest of science, and withal great power of application, and a passionate love of all branches of knowledge. What, now, was Newton? in the whole course of his life he never exhibited extraordinary aptitude for any thing save mathematics; his early and only attachment inspired him with a vein of the most wretched rhymes; in later days, his mind appeared to be singularly devoid of passion and pride; and he had none of that eager and restless hungering for popularity which rendered almost abortive the wonderful acuteness of his contemporary, Hooke: hence he was able to apply his mathematical talents closely and continuously to important problems, undistracted by any little desire to secure the praise of the passing moment. "One thing at a time" was as much the principle on which he thought, as that on which the Black Prince fought and acted. Newton's head indicates mathematical talents of the highest order—that is, genius; as any one may see in his bust by Roubilliac, in Trinity College Chapel, Cambridge, to say nothing of his portrait by Lely at Hampton Court, and the other in the British Museum; and these in their free and unfettered action, explain the intellectual character of the man, and the origin of his towering reputation. Mathematics have been invented by the minds of men, and, not being the result of simple observation, have taken a stance somewhat superior to the other or inferior sciences, which are principally cultivated

by Individuality, Form, and Comparison. But mathematics are also the simple and necessary result of a large endowment of Weight, Form, Size, Order, and Number ; and their working, uncontrolled by antagonistic propensities, with, it may be, a tolerable share of Causality and Comparison, will give the highest mathematical capacity ; and such was the endowment of Sir I. Newton. He was capable, in virtue of the above perceptive faculties, of following out to its minutest ramification every mathematical consequence, and of drawing from each its easy and natural inference. He understood his exact and accurate though intricate premises so entirely that he could not be wrong in his conclusions ; and when the idea of gravitation entered his mind, as it might that of an ordinary individual, it had no mathematical prejudices to encounter in him, and he instantly found many corroborations of this grand truth, until his confidence in the accuracy of Cassini induced him to lay the inquiry aside, afterwards to be resumed when the error of that astronomer was corrected. Such ideas may be said to resemble the seeds of vegetables, which may lie dormant in ungenial soil for years, but, when exposed to warmth and moisture, which are to them what genius is to truth, germinate and produce the perfect plant. The praise, then, to be claimed for Newton, is that of a mathematical capacity of the first order, and nothing else ; and what phrenologist supposes that Causality, Comparison, Wit, and Ideality, are necessary to such a character ? for it is these that give the majestic appearance to the anterior portion of the head, so remarkable in the portrait of Bacon, and which rendered him emphatically, as Walpole called him, “ the prophet of arts.” The idea of the *Novum Organum* was that of a great mind, and nobly was it worked out by the vast capacity of its conceiver. Newton’s was a purely contemplative character ; Bacon’s contemplative and active. The former was a great philosopher ; the latter a great statesman, and great philosopher, and withal an accomplished man of the world. The will of Newton impelled him to the incessant contemplation of one favourite science ; that of Bacon made him desire and achieve the mild glory of philosophy, and the more thorny, but not more brilliant crown of political reputation. Lastly, Newton never appeared to possess that comprehensive acquaintance with the characters of men, which is given by Causality, Comparison, and Wit, and which so eminently characterized Bacon. Thus, Newton possessed a limited capacity of the highest order (for his theological writings, only remarkable when illustrated by his mathematical knowledge, add nothing to his fame) ; while Bacon’s abilities were almost universal,

and have enabled him to attain and retain the highest reputation for political and scientific ability; for the blot of his life was the result of a defective moral endowment, and not of want of penetration.—I am, &c.

C. P.

III. *Experimental Inquiry to determine whether Hypnotic and Mesmeric Manifestations can be adduced in proof of Phrenology.* By JAMES BRAID, M.R.C.S.E., Manchester. (From the "Medical Times," No. 271, 30th November 1844.)

In a paper in the *Medical Times* (No. 258),* I intimated my intention of instituting a series of experiments, on a plan which I considered better calculated for testing Phrenology, than any which had been applied during the hypnotic mesmeric sleep. I shall now very briefly detail the result of the experiments performed for that purpose.

In the above paper, I explained the reasons which led me to consider that none of the experiments which had been performed for this purpose, during the mesmeric or hypnotic conditions, should be held as proof either *for or against* Phrenology. I especially contended for this, on the ground of the undoubted fact, that, through the laws of sympathy and association, it was quite possible to excite *various and opposite feelings from the same points*, according to circumstances.

In the *Medical Times* for the 13th of January 1844, I explained, as one of the peculiar features of the excitability of the nervous system induced by Hypnotism, that the mind is liable to manifest itself as entirely absorbed in whatever individual passion or emotion it may be directed to; and, moreover, that an idea being excited in the mind, *associated with contact with ANY part of the body*, whether head, trunk, or extremities—by *continuing such contact* the mind might be rivetted, for an almost indefinite length of time, *to the same train of ideas*, which would work themselves up into more and more vivid manifestation, according to the length of time afforded for that purpose. It thus appeared to me, that, by availing ourselves of these peculiarities, we might very readily determine the *relative forces of the different emotions and propensities*. For example, by exciting the various passions and emotions in succession, through auricular suggestion, and by fixing each new idea by mechanical contact with the *same point* of the patient,—as the *suggestion and fixation*

* Reprinted in the Phren. Jour., xvii. 359.

of the ideas would be the same in all, provided an equal length of time was allowed for each to develop the force of its manifestation, any *difference* in the *relative force* could only be attributable, on phrenological principles, to a corresponding difference in original development as regards size, or to greater or lesser activity of the respective organs, arising from the degree of exercise of corresponding portions of the brain. Then, again, by comparing the *relative forces* of the *manifestations realized by such experiments*, with the *known character* of the individual, provided they both coincided; by again comparing them with what a practical phrenologist should determine, *simply from the cranial developments*, as to what *ought* to be the character of such individual; if the latter was found to correspond with the former, then would Hypnotism be a proof *in favour of Phrenology*; but, if *they differed*, it would prove just as much *the contrary*.

On the 3d of August 1844, in the presence of a number of scientific friends, including Sir T. Willshire, Bart.; Mr Jewett, of Oxford; Capt. Thomas Brown; Mr Sowler, barrister (of this town), &c. &c., after explaining my views and intended mode of proceeding, we commenced as follows:—We had the heads of five patients examined by Mr Bally, an eminent phrenologist of this town, and the relative forces or values of the phrenological developments of each carefully noted on his printed forms. Each of the subjects was then hypnotised separately, in another room, in the presence of the gentlemen already referred to, when all the leading emotions, denoted by phrenological organs, were excited successively, in the following manner, the resulting manifestations of each being carefully noted.

I considered that putting a ring on the same finger or thumb of a patient, was the most convenient and least objectionable mode of fixing the ideas suggested. This, therefore, was the mode of procedure. On each occasion I spoke aloud to this effect:—"Now, gentlemen, the moment I place this ring on his (or her) finger or thumb (as the case might be), you will observe that he (or she) will think of *devotion*;" at the same time putting the ring on the finger or thumb indicated. Immediately the emotion was manifested; and, having afforded it a certain time to develop itself, its *relative force* was determined on, and accurately noted on a blank form. The ring being removed, the patient, who had been kneeling, now arose; and another idea was then excited and fixed in the mind in the same manner. This new idea having been allowed time to develop itself in the same manner, and its relative force determined and recorded as in

the former case, we passed on to others, until, in this manner, we had tested all the emotions and propensities which we deemed of most importance. The same plan was adopted with all the five subjects,

Our next object was to compare the results obtained by this process, with Mr Bally's phrenological record. I must not omit to add, that the forms on which Mr Bally had recorded the relative values of the organs, previous to the patients being hypnotised, had been put aside, so that we might not be biased in our estimate of the manifestations by our knowledge of the *phrenological development*. On comparing the two records, the result was certainly unfavourable to Phrenology; for in no instance did the manifestations accord with the value or force set upon the several organs, in more than four out of thirteen leading characteristics; whilst, in one case, there was no coincidence whatever,—proving, at all events, to our minds, that Phrenology can gain no corroborative aid either from Mesmerism or Hypnotism. The manifestations were quite as characteristic when excited by *auricular suggestion* as by muscular suggestion, or manipulating either the head, trunk, or extremities.

On comparing the *known characters** of the above individuals, with what was developed and recorded of them during hypnotism, there was a remarkable coincidence. Similar results have also been realised in several other patients whom I have tested in the same manner, since. Nor is it at all surprising that such should have been the case, and that Phrenology should not derive any direct and decided support from Hypnotism and Mesmerism, as had been anticipated. In the latter condition, even granting the organology of phrenologists to be strictly true, the hypnotic and mesmeric manifestations will accord rather with the *acquired energy and activity* than with the *mere size* of particular organs, or separate portions of the brain. On the contrary, Phrenology merely contemplates the estimating what *ought* to be the value of certain tendencies,† by the *size* of the organs which answer to them. Moreover, although it is true that a muscle

* In a note which we have received from Mr Braid, he says—"I formed my opinion of the 'characters' partly from personal knowledge, and partly from inquiries at the relatives and most intimate friends of the individuals." He has sent us the developments, and estimates of the strength of the manifestations, which latter, he says, are noted in accordance with the opinion of the majority of those present; but their publication does not seem to be necessary.—ED. P. J.

† Mr Braid here evidently means the *natural* strength of tendencies, in contradistinction to that acquired by exercise, &c.—ED. P. J.

increases considerably and visibly in *size* by exercise, it does not follow that separate organs of the brain must increase in the same ratio (or in any ratio at all), with particular qualities of the mind.

Mere *size* is not sufficient to determine the *force* of function. Much of the perfection and force of function may depend on the *perfection of structure*, arising from practice and habit, giving greater proclivity to act in a particular manner. I am aware that instances are referred to, where extraordinary corresponding changes have taken place in the form of the head, in individuals who have been actively engaged in new pursuits; but I suspect that such constitute the *exceptions, not the rule*. I believe that great changes may take place in the moral and intellectual powers, without any appreciable corresponding change being manifested in the external form of the skull. For example, every one knows that a moderate sized eye may be as useful for correct vision as a very large one; and it is also an undoubted fact, that the eye may be greatly improved in *accuracy of function by practice, and consequent greater concentration of its powers*; but who will maintain that there is thus induced a positive and appreciable enlargement in the *size of the organ of vision*?*

No one will dispute that the brain is the organ of the mind; nor will any dispute the power of moral and religious training in changing character, whether they hold that the mind manifests its powers through the brain as a *series of distinct organs*, or parts, adapted for *separate* purposes, or as a *single organ*, and consequently as a servant of all work. In whichever mode this is to be viewed, experience proves that there are antagonist powers and principles in our nature, and that it is indispensably requisite that we should endeavour to "cease to do evil," in order that we may "learn to do well." Whether corresponding changes in the *size of the brain*, and *form of the skull*, take place *pari passu* with such changes in the mental and moral condition, I do not pretend to be competent to decide; but, as already stated, I strongly suspect that great changes may take place in the moral and intellectual powers and tendencies, without any *appreciable* corresponding changes being manifested in the external form of the skull.

This, then, seems to be the true position and relation between the two sciences. Phrenology professes to determine

* What grounds has Mr Braid for supposing that the eye is not enlarged by exercise? Analogy is certainly against him; and even if accurate observations were to prove him in the right, still the *cerebral organs of vision* might be increased.—Ed. P. J.

character,* according to the relative *sizes* of particular parts of the brain, and not according to the different *degrees* of *activity* of these parts, *independently of size*. The latter is an extent of refinement to which it does not pretend to have attained.† The manifestations realised by Mesmerism and Hypnotism, on the contrary, display the *energy acquired from habit or practice*, as well as (or rather than) the *original proclivity* to particular trains of thought and action. However well adapted, therefore, the latter mode may be for determining the relative force of the existing tendencies (and, therefore, might be useful as an adjuvant to Phrenology), if taken alone, it is calculated rather to *oppose* than *corroborate* the deductions from mere cranial development. Thus, granting, for the sake of argument, that all the separate organs of phrenologists were satisfactorily established, the *extreme activity* of one function or propensity, *superinduced by habit and practice*, and the dormancy or sluggishness of others *from want of exercise, might, or, rather, most probably would*, give manifestations quite at variance with existing development, estimated by the *relative sizes of the different organs*.

This very circumstance, however, proves that Hypnotism or Mesmerism might be made a valuable adjuvant, for enabling the phrenologist to estimate character more correctly and certainly than by Phrenology only. He would thus, at once, be furnished with a key for determining how far habit, practice, and other concurring circumstances, have been at work *in aiding or counteracting original predisposition*. This has always been a very difficult point for phrenologists to determine; perhaps it has been the greatest difficulty they have had to contend with. I would, therefore, recommend them to avail themselves of Hypnotism or Mesmerism, as valuable auxiliaries for this purpose; but, if they seek for more from them, I suspect that they will find, that the genuine manifestations brought out by Hypnotism or Mesmerism *are more likely to contradict than to support Phrenology*.

In conducting the experiments detailed in this paper, the greatest care was taken to guard against every source of fallacy. I should be glad if others would repeat them, *with*

* Correctly speaking, not "character," which is the result of natural endowment and extraneous circumstances together; but innate *dispositions* and *capacities*, which may or may not have been strengthened or weakened by training, but which, when strongly marked in persons of an active temperament, cannot be materially changed by extraneous causes. It is from the latter sort of cases that evidence of the functions of the cerebral organs is derived.—ED. P. J.

† Temperament throws much light on the activity.—ED. P. J.

equal care, on a greater number of patients, and record the results. The method indicated is so simple and obvious, that any one having time and inclination for prosecuting the inquiry further, may very easily do so. I beg, however, to offer one parting remark, which, if not strictly attended to, will render such experiments utterly worthless. The auricular suggestions must be given in every instance in the same form of words, excepting the indispensable change of the name of the new emotion to be excited, and also, as nearly as possible, *in the same tone of voice*. If a different degree of *force of utterance* is used in any instance, it will, in a considerable degree, modify the character of the subsequent result. And no whispering or hints should be given, as to the degree of force which may be expected to manifest itself in any instance. Neither should they know, before being hypnotised, the relative value of their phrenological developments.*

* Mr Braid has not shewn that excitement of the faculties by suggestion, is equivalent to their excitement by contact over the organs (for may not the effect be partly attributable to greater vividness, in some persons operated on, than in others, of the *ideas* which precede the emotions?) Assuming, however, that the two are alike, and, moreover, that Mr Bally's estimates of the cerebral development, as well as Mr Braid's own estimates of the mental manifestations and the ordinary characters of the subjects, were correct (points on which we have no means of judging), such experiments as the above are evidently worthless as tests of Phrenology, except where the brain has the strongly marked character adverted to in a preceding note. This, indeed, is the conclusion of Mr Braid himself. The result of the present cases simply is, that in Mr Braid's opinion there were great discrepancies between Mr Bally's estimate of the size of the organs on the one hand, and his own understanding of the actual character of the individuals, and the estimate, by the majority of the spectators, of the power with which they manifested the different faculties in the hypnotic state, on the other. If it be certain that, in the hypnotic state, those faculties are always most strongly displayed which the person most strongly manifests in his habitual conduct, then Phrenology may be much more simply tested by at once comparing the cerebral development with the habitual conduct, than by the circuitous method proposed by Mr Braid. An intelligent correspondent, who has seen some of his experiments, writes us as follows:—"The manifestations elicited by suggestion, without contact over the organs, and those produced by contact without suggestion, appear to me to belong to two *distinct classes*, which ought to be kept separate and apart. Moreover, to estimate manifestations by *figures*, appears to be difficult and arbitrary. I am quite aware that, in certain conditions of the hypnotic state, relatively small organs may be roused into considerable activity by suggestions, when those *same* organs could not be excited by *contact*, while the larger ones *could*. This I have seen very well illustrated in some of Mr Braid's own patients. Instead, therefore, of considering Mr Braid's test any test at all of Phreno-Mesmerism, I apprehend that the only legitimate mode of testing it is to take maiden

III. NOTICES OF BOOKS.

- I. *The Deaf and Dumb: their position in Society, and the Principles of their Education, considered.* By W. R. SCOTT, Ph. D., Principal of the West-of-England Institution for the Education of the Deaf and Dumb. London: Joseph Graham. 1844. Post 8vo, pp. 111.

The object of Dr Scott in sending forth this neat little volume, is to render the public better acquainted than they are at present, with the extent to which deafness prevails, with its effects on the moral and intellectual character of its victims, and with the necessity of making better provision for their instruction. He thinks that a people who contribute thousands annually to enlighten heathen ignorance, will never allow similar ignorance to remain among themselves, without attempting to remove it, were they but acquainted with its existence. Although it would seem that, in Europe, about one person in 1600 is deaf, yet, as the disease has nothing obtrusive in its character, the necessity of such appeals as the present is much greater than in behalf of the victims of more visible calamities.

"Dumbness," says Dr Scott, "sometimes arises from other causes than that of deafness: it may arise from an imperfect formation of the organs of the voice; and children who are so imbecile from mental weakness, as to be unable to acquire a knowledge of articulate sound, will remain dumb; but this dumbness must be carefully discriminated from that produced by deafness. Moreover, the idiotic-mute has no thoughts to communicate, but the deaf-mute may have thoughts, but wants the means of communicating them. A deaf-mute is dumb only because he cannot hear sound, and therefore cannot be expected to use that of which he can form no conception. Those, again, who are dumb from imperfect organs of the voice, may perfectly understand the language they hear spoken, though themselves unable to use it. This kind of dumbness must also be distinguished from that occasioned by deafness, as its effects upon the sufferer are by no means of the same character with those perceived in the deaf-mute. That class, then, only of the dumb who are also deaf, and

cases of non-phrenological patients, and, carefully avoiding suggestions of every kind, try what pointing or contact will effect, and observe the relative distinctness and force of the manifestations from differently-sized organs."—ED. P. J.

who have been termed with significance *deaf-mutes*, it is our object to contemplate."

Dr Scott justly observes, that the deaf and dumb form *no distinct class in their natural intellectual constitution*; that the difference between them and others is wholly produced by their want of social intercourse; and that, however, after a time, this deprivation may prevent the formation and development of their character, still by nature they are endowed with the feelings, sentiments, and passions, which are common to the rest of mankind.

Their moral and intellectual inferiority has been exaggerated, but certainly is considerable, though capable of being lessened by judicious instruction and exercise. "Amongst them will be found all the variety of intellectual and moral character which is presented by others. The difference, therefore, which they may be found to possess, as regards *degree*, in their moral and intellectual nature, must find its cause in the absence of that anxious training which parental affection—when communication is complete between parent and child—will instinctively provide. But, shut out from intercourse with his friends, as a deaf and dumb child is, no moral truths enter his mind; he sees in the world around him no government or order; he is not taught to recognise there the guiding hand of an all-wise Providence; and he remains without God in the world, a stranger to every sentiment that ennobles, and to every hope that elevates man above the transitory things of time. . . . Those of mankind who are endowed with hearing and speech, from their constant intercourse with society, educate themselves, and long before they have arrived at mature age, they will have acquired an extensive acquaintance with many of the most useful facts of nature. . . . Then, again, if we can estimate the amount of useful knowledge—the historical facts—the moral truths, &c., which we have received in the conversation of social life, we shall approximate to an estimation of what our education owes to our being one of an intelligent community. It is only by such an examination, that the true position of the deaf and dumb is ascertained." —Pp. 15-17. The error into which many fall, of supposing that the faculties of the deaf and dumb are as perfect as those of other men, only the means of expression being deficient, evinces extreme ignorance of the effects of exercise on the brain. "In the conversation of those who verbally pitied their case," says Miss Martineau, "I could frequently trace an inward persuasion that the deaf and dumb were better off than those who could hear and speak; and there were few who discovered, while admiring the supposed allegorical dis-

course or compositions of the pupils, that the whole was little more than a set of images, absolutely empty of the abstract truth which they were supposed to involve. *I have witnessed this tremendous error in teaching the deaf and dumb elsewhere.*"—(*Society in America*, iii. 177.) This error is not confined to America: in our own country it is sometimes asserted that, to compensate for their defects, the deaf and dumb enjoy "a powerful imagination, which more than supplies to them the loss they sustain in the deprivation of a sense." Here, says Dr Scott, imagination is supposed to be a power able of itself to *create*, not by forming *new groups* out of *old materials* furnished by sensation, but by originating, *proprio vigore*, something altogether different from, and independent of, acquired perceptions. Nothing, he adds, "can be further from the truth. Let us consider the nature of memory; no one ever mistakes the legitimate operations of this faculty, yet imagination is very nearly allied to it as a mental act. Memory is the power which the mind has of retaining and reproducing ideas formed by the intellectual powers, attended by the consciousness of their former existence, and following the order of events as they were produced in nature. But memory could have no place as a mental power, if there did not exist facts in the mind on which it could be exercised." In like manner, "imagination enables us to form new and ideal groups, but these are all formed out of the materials gathered in the first instance from sensation."—P. 21.

After comparing the condition of the deaf with that of the blind, Dr Scott proceeds to notice the means to which the former naturally resort, in order to establish an intercourse with other men. "Unable to address the ear, they have recourse to the eye of their fellows, and by a species of communication—*gesticulation*—still open to them, they find that some of their wants and feelings can be made known. It is upon this fact that the hope of restoring the deaf and dumb to society rests. . . . The mind is subject to a variety of feelings, and the effects of these are visible in the features, attitude, or gesture. Every distinct emotion has its appropriate expression, and thus a language altogether independent of words exists, displayed by the countenance or action of man. Every person is aware of the bodily expressions of fear, love, joy, and one can seldom ever mistake or confound the language of these with that of courage, hatred, or sorrow. Such language is immediately and instinctively recognised in every state of civilization, from the American savage to the most refined citizen. . . . This language addresses itself to the sight;

the deaf and dumb therefore are able to avail themselves perfectly of its use, and thus it possesses for them, through life, always a charm which written language appears rarely to acquire. In the application of this language to their instruction, a somewhat wider extension is given to it than in such instances as we have mentioned. It is made to embrace a class of signs, that, though perhaps less natural, still partake of that character, and become of great importance in the mute instruction. Such are the imitations of the forms and actions of animals, and of certain motions and actions of the body, which, though perhaps not strictly natural, still are easily understood. There are certain modulations of the voice which also are considered a species of natural language; but of this division the deaf and dumb can avail themselves but little, since, though they may be able to express themselves by such means, still they cannot hear it in others. It is by gesture, therefore, that the uneducated deaf-mute succeeds in his communication with the world. He sees, for instance, one of his companions under the influence of anger—he sees his swollen features—his distorted visage—his convulsed limbs, and in fact he has carefully noted and observed all the violence of action visible in anger. To tell the circumstance of his having witnessed this, he would imitate those contortions, and by acting the scene he would relate to others what he had himself beheld. . . . Those who have only superficially examined natural language, have little conception of its force; and though not to be compared, in many respects, to written or spoken language, yet it has, when cultivated and developed, considerable power of expression. Phrenologists have often dwelt upon the fact, that every mental power has a natural and manifest expression peculiar to itself; and though the idea has met with considerable ridicule, yet careful observers, whether through the means of Phrenology or otherwise, will find that such gestural expression has a much wider range than is generally supposed. The power of mimicry, which we frequently find so strongly developed amongst the deaf and dumb, depends altogether upon an appreciation of those minute shades of difference seen in natural expression, and which go to produce manner in individuals. There is a general character, as there is a general likeness, which is common to man, and which is discovered by all; but it is he that discriminates the peculiarities which apply to each, that makes the great artist. Careful to observe all such differences, the deaf and dumb catch these peculiarities, and, consequently, are able to reproduce them; whereas, those who are not so careful in observation of natural gesture, lose the minute varieties

which belong to the individual in the general features which belong to the mass. Gesture, then, is the way which leads us to the mind of the deaf and dumb, and it forms one of the most important means for his instruction. It is not, however, a means that will take the place of his mother tongue. He cannot through it make himself generally understood; and as a language for the improvement and development of his reasoning powers it is incomplete. It has a force and power when addressed to our feelings, but it is far inferior to written or spoken language, when addressed to our reason. Thus it may be said to be the language of poetry, of painting, and of acting, but it fails as a language of argument. It may entice, but it cannot so fully and clearly convince. It is from this cause that natural language is defective as a means of communication. Artificial language, like algebraical symbols, signifies and speaks to the understanding with accuracy and precision, but to the feelings it is comparatively dead: whilst the language of nature has the power of at once rousing, with energy, our passions."—Pp. 33–37.

Dr Scott remarks, that as long as the deaf and dumb remain in that state where their mental operations are directly associated with gesticulate signs, their use of alphabetical language will remain defective, and their power of expression limited; and not until they are so instructed as to associate ideas directly with written words, will alphabetic language become easy to them, and their mental operations clear and precise. To attain this end must be the unceasing endeavour of all instructors; and until they arrive here, their instructions are incomplete. The language of gesture, then, which the necessity of the deaf and dumb compels them to adopt in the first instance, must be retained no longer than necessity requires. Habit, and the comparative quickness with which ideas can be expressed by gestures, make the deaf-mute cling to the use of these; and, moreover, the time devoted to his instruction is very generally insufficient; the result of all which is, that his power to use alphabetical language is seldom so perfect as it might be rendered. In Dr Scott's opinion, too much importance has been attached to articulation. For the great mass of the deaf and dumb, he thinks that instruction ought to be confined to language as expressed under visible forms. They acquire articulate language with less certainty and quickness than written; and it is upon the latter that the deaf-mute must chiefly be made to rely, for his intercourse with the rest of mankind. As remarked by Dégérando, "written words awaken in the deaf-mute the conceptions of things themselves, in the same manner as they

awaken in ours the conception of sounds ; with this difference, however, that polysyllabic words recall to the deaf-mute but a single idea, while they recall to us a number of sounds at once. We cannot, therefore, doubt, that for the deaf and dumb our alphabetic writing, losing this character, can become to them truly ideographic." Pictures, as one mode of exhibiting natural language, and as affording representations of objects and actions which cannot be conveniently displayed otherwise, are much used in educating the deaf-mute. So is dactylogy, or finger-talking, which has been described as only " writing set free from its material dress," and which " is to alphabetic writing, what that is to speech."

The second part of Dr Scott's work is entitled, " Remarks on Deafness, with hints for the early training of the Deaf-mute." He inquires into the causes of congenital deafness: these are often difficult to be traced; nor are the facts collected on the subject sufficiently extensive, or accurately ascertained, to afford much light. " It has often been observed that cases of congenital deafness are frequently found amongst persons who are of a strumous habit, and that the disease has a tendency to appear where marriages of consanguinity have taken place. It is probable that there is no institution for the instruction of deaf-mutes, that does not contain several pupils who are the offspring of cousins. Nevertheless, it cannot be denied that there are many instances of families where intermarriages have taken place without deafness having appeared." Where deaf and dumb persons have married, it does not appear that the offspring generally are deaf. " Out of several cases," says Dr Scott, " which have come within our own personal knowledge, where either one or both of the parents were deaf and dumb, only one instance occurred where any of the children were afflicted with this disease. In this instance the father only was deaf and dumb. This absence of anything like regularity in the transmission of the disease has led some to deny its being hereditary.* We have already observed, that little is known about the transmission of disease from one generation to another; but that such a law exists in nature cannot be denied."

Dr Scott proceeds to discuss this important question further; but here our limits do not allow us to follow him. With the view of securing, as far as possible, the due development of all the organs of the body—those of hearing among the rest—he advises mothers to qualify themselves to act judiciously during gesta-

* " If the deafness of the parent occurred *after birth* we would not anticipate the transmission of the disease."

tion, as well as after the birth of their children. "Early attention to the physical development and moral training of all classes of children is of acknowledged importance, and the deaf and dumb do not, from their peculiar condition, form any exception to this law of nature; but, on the contrary, demand if possible a more careful attention in such particulars than others. On the parents of deaf and dumb children, then, this duty devolves, and it is of immense importance. For if it be neglected, no future education will be able to compensate for its loss." To such parents Dr Scott offers some excellent advice, which, however, we can only refer to. By every mother who desires to bestow a sound physical and moral education on her offspring, this part of the volume may be perused with the greatest advantage.

In concluding our imperfect notice of Dr Scott's useful and interesting treatise, we cannot help expressing the hope, that a phrenologist so favourably situated as he for studying the human mind in peculiar circumstances, will avail himself of every opportunity that may occur, of adding to our knowledge of mental philosophy.

II. *The Duality of the Mind proved by the Structure, Functions, and Diseases of the Brain, and by the Phenomena of Mental Derangement; and shewn to be essential to Moral Responsibility. With an Appendix,—1. On the Influence of Religion on Insanity; 2. Conjectures on the Nature of the Mental Operations; 3. On the Management of Lunatic Asylums.* By A. L. WIGAN, M.D. London: Longman & Co. 1844. 8vo.

Although Dr Wigan makes no pretension to the character of a man of science, and there is little that is absolutely new in his desultory but pleasant and ingenious volume, we heartily welcome it as the product of honest and long-continued observation and thought, in a field where additional light is far from being superfluous. In the course of a long medical practice he has evidently seen and studied many and various phases of human nature; and what he has seen he describes in lively and vigorous language. Though not a believer in Phrenology (which, indeed, he does not profess to have much acquaintance with), he labours, like ourselves, to elucidate the influence of bodily conditions upon the mind; and phrenologists will find in his work many hints and illustrations that may be turned to excellent account. He claims the credit of

originality in the conception of his leading theory, the duality of the brain ; for, says he, though it might be maintained by preceding writers, “no suggestion reached me till more than twenty years after I had completely arranged the whole in my own mind. The previous hints may diminish the *merit*, but not the *value*, of my demonstration. If I can firmly fix the latter in the convictions of the public, it is all I desire to accomplish : the originality may be denied without giving me the slightest pain.” He adds, in anticipation and deprecation of critical censure, “that a man cannot well be accused of precipitation or presumption who waits till his sixtieth year to promulgate opinions he has held during half his life with daily increasing conviction ; which he believes to be of the greatest importance in medicine, morals, and jurisprudence—in the management of the insane—in the treatment of criminals—the education of youth—and, above all, in the discipline of *imperfect, defective, and distorted minds*.”—Pp. vii. viii. Nevertheless, considering the close connexion of his subject with Phrenology, we cannot help thinking, that the author’s neglect to make himself acquainted with the doctrines and evidences of that science, not only is unjustifiable in itself, but has greatly detracted from the consistency and value of his conclusions.

The word *mind* is employed in senses so different, that Dr Wigan rightly begins by telling in which of them it is used by himself. Conceiving that the employment of the words *mind* and *soul* as convertible terms is a serious obstacle to the freedom of investigation of mental phenomena, he thus gives notice to the reader : “When I speak of *Mind*, I wish to be understood to signify the aggregate of the mental powers and faculties, whether exercised by one brain or two ; and when I have occasion to allude to the GREAT, IMMORTAL, IMMATERIAL PRINCIPLE, connected for a time with the material world by means of our physical organization—I shall call it by its proper name,—THE SOUL.”—P. 6. It is only the former, he thinks, that the philosopher has to do with ; the latter being regarded as exclusively within the domain of theology.—Pp. 6, 381, 438. He seems, however, to limit unduly the signification of the phrase “mental powers,” by using it as synonymous with the intellectual faculties, exclusively of the affective or emotional. (See p. 18.)

His leading notion is, that instead of our having only *one* brain, divided into what are called the two hemispheres, these “are really and in fact two distinct and entire organs, and each respectively as complete (indeed more complete), and as fully perfect in all its parts, for the purposes it is intended to perform, as are the two eyes : . . . it would

be just as reasonable to talk of the two lobes or globes of the eye, as of the two hemispheres of the brain."—P. 24. And the propositions which he undertakes to prove are the following :—

1. That each cerebrum is a distinct and perfect whole, as an organ of thought.

2. That a separate and distinct process of thinking or ratiocination may be carried on in each cerebrum simultaneously.

3. That each cerebrum is capable of a distinct and separate volition, and that these are very often opposing volitions.

4. That, in the healthy brain, one of the cerebra is almost always superior in power to the other, and capable of exercising control over the volitions of its fellow, and of preventing them from passing into acts, or from being manifested to others.

5. That when one of these cerebra becomes the subject of functional disorder, or of positive change of structure, of such a kind as to vitiate mind or induce insanity, the healthy organ can still, up to a certain point, control the morbid volitions of its fellow.

6. That this point depends partly on the extent of the disease or disorder, and partly on the degree of cultivation of the general brain in the art of self-government.

7. That when the disease or disorder of one cerebrum becomes sufficiently aggravated to defy the control of the other, the case is then one of the commonest forms of mental derangement or insanity ; and that a lesser degree of discrepancy between the functions of the two cerebra constitutes the state of conscious delusion.

8. That in the insane, it is almost always possible to trace the intermixture of two synchronous trains of thought, and that it is the irregularly alternate utterance of portions of these two trains of thought which constitutes incoherence.

9. That of the two distinct simultaneous trains of thought, one may be rational and the other irrational, or both may be irrational ; but that, in either case, the effect is the same, to deprive the discourse of coherence or congruity. Even in furious mania, this double process may be generally perceived ; often it takes the form of a colloquy between the diseased mind and the healthy one, and sometimes even resembles the steady continuous argument or narrative of a sane man, more or less frequently interrupted by a madman ; but persevering with tenacity of purpose in the endeavour to overpower the intruder.

10. That when both cerebra are the subjects of disease, which is not of remittent periodicity, there are no lucid intervals, no attempt at self-control, and no means of promoting the cure ; and that a spontaneous cure is rarely to be expected in such cases.

11. That however, where such mental derangement depends on inflammation, fever, gout, impoverished or diseased blood, or manifest bodily disease, it may often be cured by curing the malady which gave rise to it.

12. That in cases of insanity not depending on structural injury, in which the patients retain the partial use of reason (from one of the cerebra remaining healthy or only slightly affected), the only mode in which the medical art can promote the cure beyond the means alluded to, is by presenting motives of encouragement to the sound brain to exercise and strengthen its control over the unsound brain.

13. That the power of the higher organs of the intellect to coerce the mere instincts and propensities, as well as the power of one cerebrum to control the volitions of the other, may be indefinitely increased by exercise

and moral cultivation ; may be partially or wholly lost by dissuetude or neglect ; or, from depraved habits and criminal indulgence in childhood, and a general vicious education in a polluted moral atmosphere, may never have been acquired.

14. That one cerebrum may be entirely destroyed by disease, cancer, softening, atrophy, or absorption ; may be annihilated, and in its place a yawning chasm ; yet the mind remain complete and capable of exercising its functions in the same manner and to the same extent that one eye is capable of exercising the faculty of vision when its fellow is injured or destroyed ; although there are some exercises of the brain, as of the eye, which are better performed with two organs than one. In the case of vision, the power of measuring distances for example, and in the case of the brain, the power of concentrating the thoughts upon one subject, deep consideration, hard study ; but in this latter case, it is difficult to decide how far the diminished power depends on diminution of general vigour from formidable and necessarily fatal disease.

15. That a lesion or injury of both cerebra is incompatible with such an exercise of the intellectual functions, as the common sense of mankind would designate *sound mind*.

16. That from the apparent division of each cerebrum into three lobes, it is a natural and reasonable presumption that the three portions have distinct offices, and highly probable that the three great divisions of the mental functions laid down by phrenologists, are founded in nature : whether these distinctions correspond with the natural divisions is a different question ; but the fact of different portions of the brain executing different functions, is too well established to admit of denial from any physiologist.

17. That it is an error to suppose the two sides of the cranium to be always alike ; that, on the contrary, it is rarely found that the two halves of the exterior surface exactly correspond ; that indeed, in the insane, there is often a notable difference—still more frequent in idiots, and especially in congenital idiots.

18. That the object and effect of a well-managed education are to establish and confirm the power of concentrating the energies of both brains on the same subject at the same time ; that is, to make both cerebra carry on the same train of thought together, as the object of moral discipline is to strengthen the power of self-control ; not merely the power of both intellectual organs to govern the animal propensities and passions, but the intellectual antagonism of the two brains, each (so to speak) a sentinel and security for the other, while both are healthy ; and the healthy one to correct and control the erroneous judgments of its fellow when disordered.

19. That it is the exercise of this power of compelling the combined attention of both brains to the same object, till it becomes easy and habitual, that constitutes the great superiority of the disciplined scholar over the self-educated man ; the latter may perhaps possess a greater stock of useful knowledge, but set him to study a new subject, and he is soon outstripped by the other, who has acquired the very difficult accomplishment of *thinking of only one thing at a time* ; that is, of concentrating the action of both brains on the same subject.

20. That every man is, in his own person, conscious of two volitions, and very often conflicting volitions, quite distinct from the government of the passions by the intellect ; a consciousness so universal, that it enters into all figurative language on the moral feelings and sentiments, has been enlisted into the service of every religion, and forms the basis of some of them, as the Manichæan.

The first proposition lies at the very foundation of Phrenology, and has no novelty whatever. From the beginning, Dr Gall taught that each mental faculty has two organs, one in each hemisphere; a doctrine which, of course, implied that each hemisphere is as complete an organ of the mind, as one eye is a complete external organ of sight. Dr Wigan quotes (p. 51) from Gall himself the case of a clergyman, whose right hemisphere was found by him entirely disorganised, although the patient, only three days before his death, had preached and been occupied in the instruction of youth, and had otherwise manifested the intellectual faculties in an astonishing manner. Gall's explanation of the case, which we extract from his work on the Functions of the Brain, is as follows:—"I have proved, in the first volume of my large work, that the nervous systems of the spinal marrow, of the organs of the senses, and of the brain, are double, or in pairs. We have two optic nerves, and two nerves of hearing, just as we have two eyes and two ears; and the brain is in like manner double, and all its integrant parts are in pairs. Now, just as when one of the optic nerves, or one of the eyes, is destroyed, we continue to see with the other eye; so when one of the hemispheres of the brain, or one of the brains, has become incapable of exercising its functions, the other hemisphere, or the other brain, may continue to perform without obstruction those belonging to itself; in other words, the functions may be disturbed or suspended on one side, and remain perfect on the other." * The same doctrine is repeated by Dr Spurzheim,† Dr Andrew Combe,‡ Dr Caldwell,§ Mr Hood,|| Dr Elliotson,¶ Mr Watson,** and other phrenologists. Dr Henry Holland, also, in an Essay "On the Brain as a Double Organ," published in his *Medical Notes and Reflections*, and analysed by Dr Wigan in Chapter X., only falls short of the ultimate deduction of the latter.

Perhaps Dr Wigan's book will induce some physiologists

* Gall sur les Fonctions du Cerveau, ii., 247. Dr Wigan must admit, that this is something more than a "slight indication of a slight guess at a slight portion of the theory."

† Phrenology, Sect. iii.; and Anatomy of the Brain, p. 178.

‡ "On the Effects of Injuries of the Brain upon the Manifestations of the Mind;" Trans. of the Phren. Soc., 1824, p. 192. See also *ante*, viii. 636.

§ Phren. Jour. ii. 117.

|| Id. iii. 34.

¶ Id. v. 98.

** "What is the Use of the Double Brain?"—Phren. Jour. ix., 608. The essential part of Mr Watson's theory is "the capability of independent activity of the two hemispheres." The paper is commented on by Dr Wigan, in chap. xxviii., but its existence was unknown to him till his work was nearly ready for the press.

to adopt, henceforth, that good old colloquial phrase, "the brains," instead of "the brain." But "the mind," we suspect, will keep its ground as long as "the sight" and "the respiration"—all these functions being alike performed by dual organs.

In Chapter VI., Dr Wigan gives a number of cases, where, although an entire hemisphere was destroyed, one patient "had conversed rationally, and even written verses, within a few days of his death;" another had "all his mental faculties apparently quite perfect;" a third "retained the entire possession of his faculties to the last day of his existence;" a fourth "was in full possession of his faculties, and enjoyed the use of all the organs of sense;" and so on. Now, although (as Dr Combe has clearly shewn*) the existing reports of such cases furnish no satisfactory evidence that the mental functions continued as *vigorous* as in health; and although, with Mr Hood, we think it probable *a priori*, that "the healthy condition of *both* hemispheres is indispensably necessary to the production of *their full effect* in the economy;" yet it must be allowed, that, in the cases referred to, no faculty was *annihilated* by the destruction of one of the brains. It is much to be desired, that when cases of this kind occur, the mental phenomena should be more carefully and minutely investigated and recorded than they have hitherto been. Dr Wigan justly observes, "It is worthy of remark, as shewing the little importance attached to the connexion between lesion of brain and lesion of intellect, that in the work of Dr Abercrombie, 'Pathological Researches on Diseases of the Brain and Spinal Cord,' in forty-six examples of disease destroying life, narrated in the Appendix alone, besides those in the body of the work, and many more alluded to, the state of the intellect is only spoken of in this one case, and in two more of tumor growing from the *cerebellum*. In one case, descending within the dura mater into the spinal canal, as low as the sixth spinal nerve, Dr A. only remarks, 'senses entire to the last,' but whether the senses of sight, smell, etc., or the intellectual faculties, he leaves uncertain."—P. 139.†

* Trans. of the Phren. Soc., p. 183; and Phren. Jour. viii. 637.

† In connection with this subject, we cannot help subjoining another extract, which is creditable alike to the discrimination and candour of Dr Wigan. "Cruveilhier," says he, "gives a plate with an accompanying narrative of a girl of eleven years of age, born absolutely without a cerebellum, and who would probably have lived to maturity but for defective nourishment and neglect. She died scrofulous and atrophied, in the Orphan Hospital at Paris, where she had gradually sunk during the fifteen months since her admission, being indeed at that time in a state of hopeless disease. There is one inference he draws from

Assuming, then, that there are two complete brains within the skull, we proceed to observe, that, in the waking healthy state, *these generally act in concert, so as to produce but one effect.* Dr Wigan himself teaches this explicitly on pages 49, 45, 271, and 274. Hence, it is only in morbid or otherwise exceptional cases that their discordant action can be reasonably assumed, for the explanation of mental phenomena. Nevertheless Dr Wigan is pleased to ascribe to this cause large classes of mental operations of which almost every individual is daily conscious, and which are perfectly explicable on another principle which he himself admits.

"One of two things," he observes in Chapter VI., "must be: either each hemisphere or cerebrum is a perfect whole, capable of exercising all the functions which, in the aggregate, form *the mind* of the individual; or else each half must exercise some of those functions, and the other half the remainder, so as between them to make up *a mind*. There is positively no other thing possible,—the mind is performed completely by each brain, or jointly by the two.—Now, the exact equality in number, form, colour, texture, and character, of the various parts or organs which compose each brain, and the almost as exact equality in size, at once negative the supposition that the two cerebra perform different offices; such a supposition would be contrary to all analogy, and opposed to all rational logic; but it needs neither logic nor analogy to disprove it; for we see, from the preceding examples, that when one brain is destroyed by disease, utterly disorganized, so as to be obviously incapable of exercising any functions whatever,—nay, when it is actually absorbed and annihilated,—the other hemisphere, or the other cerebrum, can carry on all the mental processes which had previously been performed by the joint action of the two; and this, in spite of the extensive destruction of the physical power of the body, by the progress of a disease necessarily fatal. Were the functions of the mind performed cumulatively by the two brains, it is clear that when one of them was destroyed, portions of the mind only would be annih-

the case, in opposition to Gall and Spurzheim, which it is no disparagement of his veracity to say that I do not believe. He could only have his information from persons in the hospital unworthy of trust on such a topic. I know by experience how ready those persons are to lend themselves to prurient curiosity, and that they can easily perceive on which side the inquirer wishes for evidence. There is no presiding judge to prevent *leading questions*; and if decency would permit, I could give some striking examples of this want of veracity on the part of the attendants in Italian, French, Swiss, and German hospitals, and even in our own, where, however, the manifestation of this sort of curiosity is held to be as degrading as it is unnecessary."—P. 96.

lated, and not the whole; that is to say, that madness would necessarily take place, and there would be an imperfect mental result, from the imperfection and defect of the organ devoted to the intellectual faculties."—Pp. 47, 48.

The question here occurs—How, then, does *one* of the brains happen to produce a strong vicious desire (or "volition," as Dr Wigan inaccurately expresses himself), while the *other* brain produces a desire totally opposite? Such conflicting desires are mentioned by Dr W. in his 20th proposition; elsewhere (p. 420), he alludes to "the *incessant* conflict of two fierce volitions," which a large portion of mankind experience;—and in relating a case on p. 81, he expressly describes it as "more especially connected with the government of the propensities than with cerebral antagonism." Yet, when the very same phenomena are only more intensely exemplified, forthwith he discards the easy, obvious, and satisfactory explanation afforded by Phrenology, and resorts to his favourite hobby, the antagonism of the two brains. He quotes, for example (pp. 109 *bis*, 138 *bis*, 256, 288), the following among a number of similar cases. "A celebrated chemist, of a mild and social disposition, committed himself a prisoner to an asylum, to save himself from an intense desire to commit murder. Often prostrated himself before the altar to implore the Divine assistance to deliver himself from the atrocious propensity, of the origin of which he could give no account. He used on these occasions, when he felt the desire coming on, to ask to have his thumbs tied together—this was sufficient to restore his composure."—P. 138 *bis*. Such cases abound in phrenological works, and exemplify in a very striking manner the conflict of the moral sentiments with morbid Destructiveness. This explanation, however, is utterly despised by Dr Wigan, who is blind to *opposing emotions*, though he can descry the less violent struggle of *intellect with emotion*. "The phrenologist," says he, "assumes the existence of an organ giving a propensity to destroy, and other organs restraining it; but how much more easily and rationally do the facts harmonize with my theory of two wills in two brains—a fact demonstrable and indisputable."—P. 139. The coolness with which Dr Wigan, while candidly avowing that he "does not profess to understand" Phrenology, here speaks of the organs being merely "*assumed*," is amusing. In his sixteenth proposition, and elsewhere,* he admits the general principle, that of each of the

* "Of the propensities, the sentiments, the perceptive and reflective faculties, the grand division seems logical and reasonable; although the

two brains different parts perform different functions. Why, then, should he reject the practical consequences to which this principle inevitably leads, and (*in defiance of his own conclusion*, which we have quoted on page 174,) prefer to assume that the two brains perform different sets of functions? If "one brain may be annihilated and the mind remain entire," must not all conflicting inclinations "remain entire?" Dr W. himself states it as "certain, that the intellectual portion of the brain does really exercise a control over the propensities,—as there is clearly some degree of self-command exercised by those who have lost one cerebrum from disease."—P. 95. "SOME degree"!! Why, for aught that appears, the degree of self-command is not at all inferior to that evinced by persons who have both brains complete. With strange inconsistency, even this "some degree" is, in another page, denied to the one-brained wretch: "the mutilated and helpless victim can scarcely any longer be considered a responsible being—he is reduced to mere animal existence—he is dependent on the kindness of others for the very means of prolonging life—he enters into no presumptuous speculations, indulges in no wanderings into forbidden regions—he is incapable of sin, or he is mad—consequently no longer a moral and responsible agent."—P. 403.* While,

location of the three divisions leaves room for much more evidence before it be satisfactory; but the minute subdivisions of the cranioscopists are by far too fantastic and arbitrary to deserve attention."—P. 160; see also pp. 89, 268, 269. Again: "It appears almost certain that sensation and perception are not performed by the same organs which exercise the purely reasoning faculties, from the consideration that while we are fully exerting the latter, the former are in a great measure suspended, and their impressions cease to influence the intellectual machinery."—P. 320. He is even of opinion that, in educating the mental faculties, "a real physical change does actually take place in the parts of the brain exercised, as indeed phrenologists assert, and shew alterations in the external form of the skull, which there is every reason to believe to be the result of such exercise of certain fasciculi of nervous fibres in the brain."—P. 344. Why, after conceding so fully that the different parts of each brain are the organs of different faculties (whether the exact locations have been determined or not), he should "not hesitate to assert, in spite of the authority of Dr Conolly, that sanity and insanity never co-existed in the same mind, that is, the same brain" (p. 136), is a problem which we are greatly puzzled to solve.

How little Dr Wigan is acquainted with the works of phrenologists, might be gathered from his statement that "many of them deny the existence of a division into three lobes."—P. 20. These, with the double brain, he conceives to be "quite sufficient to account for every discrepancy of action, and every difficulty."—P. 159.

* On p. 268, Dr W. speaks of movements "among the organs of the lower propensities," which "may require all the power of the higher organs to keep them in check; and this power," he adds, "may be insuffi-

then, we readily concede the *possibility* of one hemisphere (or brain) controlling its neighbour, we see no good reason to doubt, that, in a great majority of instances of self-command among the insane, and a yet greater among persons free from cerebral disease, the two brains *co-operate* in producing both the desires which are controlled, and the emotions or other mental states which control them. It is quite as probable that, *in general*, the two brains act together and alike, as that, in general, the two eyes or the two ears co-operate, and transmit similar impressions. We cannot help adding, with reference to Dr Wigan's notion that the co-operation of the two brains is indispensable to concentrated attention, and to the power of recalling trains of ideas (see pp. 114, 282, 312, 285),—that the case of the preacher at Vienna, mentioned by Gall, is of itself sufficient to refute the hypothesis.

But although we cannot admit the justice of Dr Wigan's application of his theory in the great majority of instances where he makes use of it, we think he has done much to prove that frequently in dreaming, somnambulism, and insanity—and perhaps also in a few normal intellectual processes—the action of the two brains is discordant, independent, or dual, as much as the action of the organ of Destructiveness is independent of and opposite to that of Benevolence. If only one brain be diseased, morbid feelings or sensations may be the result, while those belonging to the other brain continue healthy. “A mere catarrh,” says Dr Conolly, “will sometimes cause one ear to convey a different sound from that conveyed by the other; the same note, but in a different key; the same words, but as if from two voices, one an octave higher than the other. In paralytic patients all sen-

ciently exercised, or not at all.” (See also p. 317). He likewise speaks of “different portions of the whole cerebral mass ministering to the intellect and affective faculties.”—Pp. 269, 280, 310, 370. And on p. 274, in summing up his views concerning insanity, he says, “I think it may be assumed, without risk of contradiction, that the fact of each brain being a perfect and complete instrument of thought is abundantly proved: That each, while in health, corresponds entirely in action with its fellow, as is obvious from the fact that this unison and correspondence give only one result, as in the case of the two eyes producing single vision: That when from any cause one brain is disordered, a discrepancy in the two processes of thinking takes place: That the healthy brain (*aided by the action of such of the organs of its fellow as are not affected by the disorder which disturbs the others*), can, in nearly nine hundred and ninety-nine cases in a thousand, according to the usual proportion in this country, control all manifestation of morbid emotion or judgment, but that the thousandth case is the madman.”

sation is lost in one hand, one arm, or one half of the body. A patient told me, that for a time after an attack of paralysis everything appeared to him to be green; another said that he always seemed to have on one side of him a hill, and on the other a deep pit. By others I have known complaints made, that all the objects on one side seemed to be quite close to them, in consequence of which they walked with a continual direction towards the side opposite."—"If it be objected," says Dr Wigan, "that a diffused disorder is not likely to produce disease in one cerebrum only, I answer, that such limited effects from general causes are common;—the *suffusio dimidians*, for example, where only one half of the field of vision is perceived by the mind, has been known to arise from exposure to marsh miasmata. I had under my care a young gentleman about sixteen, who, from sleeping only one night in the neighbourhood of Barking in Essex, returned to town with feelings of indescribable distress, of which he could give no other description than that he felt very ill. On visiting him the next morning while he was in bed, I found one half of his face and forehead in the most profuse perspiration, while the other half remained perfectly dry and harsh. On turning down the bed-clothes, the same appearance was manifested throughout the body, but not quite so distinctly; the median line in the face forming an absolute boundary and demarcation. 'I have known a patient,' says Dr Holland, 'suffering under various symptoms of diseased brain, who frequently saw only half his face when looking in the glass; and very recently I have met with an instance where a father and daughter had each the liability of this affection. In another instance, in a young lady, the occurrence was always followed by intense headach.' We are all familiar with the effect of gout, which, affecting the whole system (or rather both systems) to a violent degree, ultimately expends its malignancy perhaps on one toe. If it locate itself in one brain, is it at all wonderful that it should produce insanity?"—Pp. 176, 177. We agree with Dr Wigan in the conclusion, that, in such instances, one brain perceives differently from the other. They belong to the same class with the cases of Moser and others, quoted in the phrenological books.* In the work referred to, Mr Combe publishes the case of a clergyman who "seemed to read with two minds," a phenomenon which the patient ascribed to "a different state of activity in the two hemispheres of the brain;" also the case of an inmate of the Crichton Institution for Luna-

* See Combe's *System of Phrenology*, 5th edit, ii. 242.

tics, at Dumfries, who imagines that he is himself and another person at the same time, and acts accordingly. Dr Wigan says, "I knew a very intelligent and amiable man, who had the power of placing before his eyes *himself*, and often laughed heartily at *his double*, who always seemed to laugh in turn. This was long a subject of amusement and joke, but the ultimate result was lamentable. He became gradually convinced that he was haunted by himself, or (to violate grammar for the sake of clearly expressing his idea) by his *self*. This other self would argue with him pertinaciously, and, to his great mortification, sometimes refute him, which, as he was very proud of his logical powers, humiliated him exceedingly. I remember very well some of the conversations he related, as taking place between himself and his other self; and though at the time they merely furnished amusement, and did not suggest the idea of a state of which I should now be glad to witness an example, yet, if such conversations were given piecemeal by a madman, they would form exactly the sort of incoherence we notice in the insane, especially if there were intervals when, the thoughts being too rapid for utterance, a number of links in the chain were dropped, the whole would then resolve into nonsense. In sitting by his side, reading to myself, I sometimes heard him exclaim, 'Well, that takes me quite aback; I must consider a little for an answer,' and then laugh heartily at the idea of his imaginary argument with himself."—P. 126. This gentleman was eccentric, and finally committed suicide.

Such cases appear to prove that, so far at least as the *intellect* is concerned, each hemisphere may act by itself, and differently from the other. Dr Wigan lays much stress also on the fact, that persons labouring under an insane delusion often entertain, *at the very same time*, a belief entirely opposed to it. "A lunatic," observes Dr Conolly, "will say that he is very ill, but that it is strange he cannot persuade himself to believe it." "I would desire," adds Dr Wigan, "no better proof that the two brains can carry on two *synchronous, opposing, concurrent* trains of thought, than is afforded by cases like these, of which I have seen several. On any other hypothesis, they are utterly inexplicable."—P. 135 *bis*. He gives the case of "a beneficed clergyman, of sincere piety, extensive knowledge, and unbounded benevolence," who complained to him of being rendered miserable by contrary beliefs; at one moment tormented with the idea that the Christianity which he preached was a fable and a delusion; and at another, having the most unhesitating faith in it, and looking with horror on his previous sceptical notions as instigated

by the devil. "I feel," said he, "the transition from one set of convictions to the other, and this state is the most frightful of all; seem as if I were two beings; and I am in momentary expectation of madness—God help me!"—P. 188. Here, says Dr W., "one brain believed, and the other did not believe;" but as it does not appear that the opposite beliefs were *synchronous*, the phenomena might arise from attending closely to different sides of the question at different times. Dr Wigan, it is true, represents him as declaring he felt as if he were two beings; but nothing ought to be founded on such expressions when merely reported from memory. Another case, related on page 89, seems more to the point than the foregoing. "A clergyman, of middle age, called on one of the most eminent of the physicians devoted to the treatment of insanity, whose reputation is spread over the whole civilized world, and addressed him to the following effect: 'I am come to consult you in my embarrassment, and hope you will give me a candid opinion. I have been for some time engaged in a speculation, into which I have unfortunately drawn one of my intimate friends, and totally ruined him. It is a dreadful thing that a man of my station, and at my time of life, should have engaged in so wicked a scheme; but there is no truth in it. I know that I have not done any such thing—that I have not entered on any speculation, or made attempts to induce any one to join me,—still it is so, and I am overwhelmed with my guilt.' After a pause, he added, 'I believe I must ask my friend to write me a letter to say there is no truth in the matter, and then, by always reading it, I shall perhaps be able to convince myself.'" P. 89. It is possible that here the two brains separately entertained the opposite beliefs; but another explanation, quite as satisfactory, may be offered. "Matters," says Locke, "that are recommended to our thoughts by any of our passions, take possession of our minds with a kind of authority, and will not be kept out or dislodged; but as if the passion that rules were for the time the sheriff of the place, and came with all the posse, the understanding is seized and taken with the object it introduces, as if it had a legal right to be alone considered there."* When, for example, a fond mother has the sentiment of Cautiousness very strong, it is apt to inspire her intellect with the belief that some evil is befalling her absent children; and although she may, when deliberately reflecting on the absence of all real grounds for apprehension, be satisfied that they are safe, still, when next

* Conduct of the Understanding, § 45.

moment her thoughts are allowed to flow in the channel to which they were formerly directed by her feelings, the painful belief returns with unabated force. If Cautiousness, instead of being merely strong and active by nature, be excited through disease, its power to mislead the intellect will be yet more irresistible; and there may take possession of the mind a delusion which, if the disease be far advanced, cannot be dislodged even for a moment.* In the case of the clergyman, then, may not slight disease of the organs of Conscientiousness have produced remorse, which, again, suggested accordant ideas in the intellect, and so led to the belief that he had culpably ruined one of his friends?—and may not it be, that when with an effort he substituted for those ideas others corresponding with facts, the erroneous belief was overcome, though, when the effort was relaxed, it instantly resumed its sway? Dr Wigan says, that “analogous cases of slighter and varying intensity are by no means rare; on the subject of religion, as on politics, an alternation of partial convictions is frequently seen.”—P. 189. To ascribe such slight alternations to the alternate victory of each of the two brains, is surely to stretch the theory till it cracks.

On page 336, allusion is made to that inequality of the two brains which is often found among the insane, and the allegation of Georget that in such cases the right side of the skull is generally the larger and more arched. Dr W. thinks it likely that the almost universal preference of the right hand arises from the superior power of the left brain, and that in left-handed persons there is a transposition of the relative power of the two brains.

We must reserve for publication in next number the remaining observations which we are desirous to offer on Dr Wigan's curious and interesting treatise. So much good nature, comprehensive charity, and enlightened toleration pervades its pages, that we feel assured that nothing we have said will give him more offence than his frank denunciations of Phrenology have given us—that is, none whatever. Let us hope that he will study the science before repeating his unlimited condemnation of its details; and that if another edition of his work be called for, he will shew wherein lie the inherent absurdity and incredibility with which he charges the division of the supereiliary portion of the brain. He seems to be already aware how much need there is for arranging and condensing his materials, which at present are thrown together in confusion almost inextricable.

* See *ante*, vol. xvi. p. 185–188.

III. *Mesmerism true—Mesmerism false: A Critical Examination of the Facts, Claims, and Pretensions of Animal Magnetism*. Edited by JOHN FORBES, M.D., F.R.S., &c. London: John Churchill. 1845. 8vo, pp. 76.

Blackwood's Edinburgh Magazine, Feb. 1845. Article on Mesmerism.

Letters on Mesmerism. By HARRIET MARTINEAU. London: E. Moxon. 1845. 18mo, pp. 70.

Medical Report of the Case of Miss H— M—. By T. M. GREENHOW, F.R.C.S.Eng. London: S. Highley. 1845. 8vo, pp. 24.

The Polytechnic Review, Feb. 1845. Letters on Animal Magnetism, by Miss CRUMPE, Author of "Geraldine of Desmond," &c.

We greatly rejoice to observe that the claims of Mesmerism have at length attracted that degree of attention from the medical profession to which they are entitled, and that at least two writers (whose productions are first and secondly above named) have brought to the investigation that impartial yet searching and duly sceptical spirit in which the subject should be approached. Though zealots on both sides will doubtless be dissatisfied, we feel confident that the two publications in question will meet with a cordial reception from the great body of candid and sober inquirers.

The pamphlet first named was written for the April number of the *British and Foreign Medical Review*, and has been reprinted separately, "in the hope," says the prefatory advertisement, "that it may prove useful in leading to a more calm and scientific investigation of the important subject of which it treats. It must be admitted that the spirit of unenquiring, unreasoning, dogmatic unbelief, in which Mesmerism has been received by many, more especially by members of the medical profession, is only less philosophical than the blind faith and headlong enthusiasm displayed by almost all the abettors of the new doctrines. It is much to be desired that some middle neutral ground, between these two extremes, might be found, on which honest and sober-minded men might meet and try to solve the problems in the only way in which they can be solved. The present essay, it is hoped, may advance the investigation, at least a few steps, in the right direction. This is all it pretends to do: it prefers no claim whatever to have mastered many of the more important difficulties, much less to have settled many of the

most disputed points." We think the writer has executed admirably the purpose in view, and we strongly recommend his pamphlet to all who desire to judge how far the mesmeric phenomena can as yet be admitted as true by well-educated and philosophical-minded men who have not devoted themselves to Mesmerism as a pursuit. The writer shews the analogy of many of the phenomena with those of hysteria, also the analogy of mesmeric with spontaneous somnambulism, and concludes that *pathologically* there is no difference between them. "Whether such abnormal conditions of the system arise from inappreciable or internal causes, and then called *spontaneous*; or whether they are brought about by obvious, outward, and designed agency, and in that case styled *mesmeric*; they are essentially the same hysteria, and the same somnambulism, differing only in their etiology." The imperfect character of existing evidence of lucidity is next pointed out and exemplified, and the probable origin of the notions concerning it inquired into; the mesmeric medium is discussed, and the evidence with respect to an occult agency examined; and finally, mesmeric therapeutics are considered, the whole subject recapitulated, and Dr Forbes's Notes of two exhibitions by the "clairvoyant" Alexis subjoined as an appendix. On page 58 a paragraph is devoted to phreno-magnetic phenomena, which the writer, rejecting the theory of an occult influence emanating from the fingers of the mesmerist, ascribes to association, in the mind of the subject, of certain mental manifestations with certain parts of the head. That this explanation is in *many instances* the true one, all phreno-mesmerists are agreed; and not a few of them will concur with this writer in the opinion, that although *pointing* be substituted for touching, the heat of the finger *may* serve, as well as contact, to suggest the manifestations. "But again," adds the writer, "we are told that results proving Mesmero-Phrenology have been obtained, where the patients knew nothing either of Mesmerism or Phrenology, and where, consequently, touch or approach could convey no suggestion. It may be so; but, for the reasons offered for our scepticism on some other points, we cannot take it upon the evidence. If we had not already extended our remarks so far, and if we did not imagine that our readers would by this time have become somewhat impatient of further detail, we think that we could exhibit a possible source of fallacy in these pretended cases." There is certainly much reason for doubting the sufficiency of a great part of the reported evidence; but cases have occurred in which no source of fallacy was discoverable, and we wish the

writer had been at liberty to exhibit the possible source he hints at. It is very desirable that farther experiments should be made with all necessary precautions, as well as recorded with perfect accuracy of detail, by scientific and sober-minded inquirers.

Of the article in *Blackwood*, we shall merely say, that it is acutely and philosophically written, and well deserves perusal. The writer has himself made experiments with success; but he rejects *clairvoyance*, and looks askance at Phreno-Mesmerism.

Miss Martineau's Letters are a reprint of those noticed in our last Number as having appeared in the *Athenæum*. In an Appendix now added, she briefly, and, we almost imagine, with an air of reluctance, announces her conversion to Phrenology.

"Since these Letters were written," says she, "phenomena have presented themselves which leave no more possible doubt in the minds of witnesses of the truth of Phrenology than of that of Mesmerism. As I wish to leave to the Letters their original character of first impressions, I insert here the observations which are necessary in order to be just to Phrenology: and I shall give no more than are necessary to this object, because I wish to reserve for study the bulk of the new appearances which have presented themselves.

"By degrees, as her mesmerist became more experienced, J. manifested the passions and emotions, and expressed the kinds of ideas, excited by touching the best-ascertained organs of the brain. Nothing can be conceived more beautiful than her countenance and gestures when Veneration, Benevolence, Ideality, and Hope are made active; nor more ludicrous than Destructiveness in so mild and affectionate a personage; nor more disagreeable than her descent from her higher moods, when Self-esteem and Love of Approbation are excited, and made to take the direction of care for her dress and appearance. But these appearances cannot be conveyed by description or assertion. I will give facts.

"On Saturday evening, December 22, when she was deep in the trance, and therefore abundant in manifestations, a lady present took a sudden fancy to speak to her in French, when she instantly, and, as it were, mechanically, repeated in English what was said. This startled all present—(four persons)—for we knew that this girl had never been taught any language. The experiment was repeated again and

again, and always with the same result. The finger of the mesmerist was then on Imitation. When it was shifted to Language, J. did not repeat what was said, but replied to it. The lady and a physician present then spoke repeatedly in Italian, and with the same results, according as the one or the other organ was touched; and then Dr — spoke to her in German, still with the same result.

“ The whole party did at first look aghast. When we came to reflect, however, how often she had replied to our thoughts, without the intervention of any language whatever, it seemed no more wonderful that she should read off our minds through languages which were unknown to her. It is, indeed, clear that, provided the ideas conveyed are within her scope, it matters nothing in what language they are uttered. She has only once since been deep enough for a repetition of this striking act; and that was on the next Friday, when she again replied to questions in French and German put to her by a lady and gentleman present.

“ One evening, her mesmerist touched at once Caution and Language, to see which would prevail—whether she would be silent or yield to the enforcement to speak. The struggle was obvious; and it ended curiously. She put up her own hand to Firmness; and by this reinforcement of Caution, was enabled to keep silence.

“ When very deep, and active accordingly, and left alone to do what she likes, her predominant affections and emotions are of the purest kind, and most beautifully manifested, so as to inspire feelings of reverence in all who see her. Her attachment to her mesmerist, and to a lady who is a patient of this kind mesmerist, is strong, and, as freed from all conventional restraints of expression, extremely interesting. One evening lately, when very happy, she drew near to these two ladies, put her arms about them, laid her head on their shoulders, and said, with a voice and countenance of affection and joy never to be forgotten, ‘ We are one ’—and the ladies felt that the honour rested with them.”

The manifestation of Imitation here recorded, is rather puzzling. To repeat in English what is spoken in French, is not to imitate what is done by the speaker, but to re-express his meaning in another garb. As the girl J. has lately been convicted of deception in her main *clairvoyant* revelation (see the *Athenæum*, 15th March 1845), the public will ascribe but little importance to the experiments above detailed. While, however, scepticism is becoming and laudable in the circumstances, it ought to be remembered that (to borrow the words of the writer of Dr Forbes’s pamphlet)

there appears to be, "both in spontaneous and artificially induced hysteria and somnambulism, frequently a *super-added* deceit—a moral symptom of the disease itself, and not an indication that *all* is imposture."—P. 28.

From Mr Greenhow's pamphlet, and the opinions which have been widely expressed by medical men, both orally and in the journals, it is evident that, whether or not Miss Martineau's health was benefited by Mesmerism, there is no conclusive proof of the affirmative.

Miss Crumpe's Letters contain a brief statement, written in a tone by no means extravagant, of her mesmeric experience and belief. She gives the following curious anecdote of her friend the late M. Felix Bodin, member of the Chamber of Deputies, and distinguished as a French historian: it was communicated to her by himself, and she says that his unquestionable veracity places its truth beyond suspicion. "Having been attacked by brain fever, he lay almost at the point of death. Still he had occasionally lucid intervals. In one of those, perceiving his own danger, he insisted on being mesmerised. A practitioner was called in by his medical attendants; but, before he arrived, my lamented friend was again in a paroxysm of his frightful malady. This was almost instantly calmed by the passes of Animal Magnetism, and he soon fell into the mesmeric sleep. While under its influence, he suddenly started upright on his couch of suffering, and imperatively called for pen, ink, and paper, which were immediately procured. To the astonishment of all present, he then, as if under the power of inspiration, rapidly composed and wrote down, though his eyes were sealed in deepest sleep, the exquisite stanzas and music, which, *unaltered*, he afterwards published under the title of '*La Langueur*.' Monsieur Bodin has often described to me the emotions of profound astonishment, with which, on being demesmerised, he contemplated this touching effusion of his genius; for, being perfectly unconscious of all that had passed during his mesmeric trance, the friends who had witnessed its composition, could scarcely persuade him to believe it *his own*, until an examination of his peculiar handwriting confirmed the fact." We have only to add, that Miss Crumpe, though extremely incredulous when first her attention was directed to Mesmerism, now believes in a magnetic influence or fluid, in its curative power, and in clairvoyance and prevision; but on the last two subjects nothing she has said is likely to convince unbiassed readers.*

* In the *Lancet* of 1st February, and subsequent numbers, will be found a

IV. INTELLIGENCE, &c.

Aberdeen.—In September last, Mr Simpson of Edinburgh gave a course of four lectures here, in which he made Phrenology a prominent topic. He adapted his illustrations most admirably to the intelligence of the working classes, and made a powerful impression. The largest place of meeting in town was crammed in every part at all the lectures. Soon after, Mr Goyder of Glasgow offered to give a course of lectures, but did not get an audience.

To those who have studied Phrenology, and are convinced of its truth, one of the most pleasing indications of its progress is the increase of the number of those who avail themselves of phrenological aid, before determining on some important step—a father determining the future pursuits of his son for example. Such is the case here.

We have recently had some remarkable criminal subjects, but the present system of jail regulations seems to exclude phrenologists in a great measure from deliberate examination. Would not a change in this respect, under proper restrictions, be beneficial to all parties?

The Phrenological Society continues its weekly meetings as usual. Since the date of last notice, papers on the following subjects have been read and discussed:—"Exposure of Socialism," by R. J. Reid, A.M.; "Sketch of the development and character of Jamina Grant, recently banished for falsehood, fraud, and wilful imposition," by the Secretary; "Sketch of Phrenology," by J. P. Walker, M.D.; "The Utility of Phrenology in Religious Enquiries," by the Secretary; "On the Proofs of the Existence of Deity; being extracts from the leading Deistical and Atheistical writers," by Mr W. Thomson; "On various modes of training some of the feelings," by Alex. Linton, Esq., surgeon, R.N. At the Annual General Meeting, the following gentlemen were elected Office-bearers and Members of Committee, viz.:—Dr Elliotson, London, *Hon. Pres.*; Professor Gregory and Alex. Linton, Esq., R.N. *Presidents*; Jas. Straton, *Secretary*; Jas. Shearer, *Treasurer*; Alex. Keith, *Librarian*; Dr J. P. Walker, Wm. Jaffray, Wm. Thomson, Geo. M. Leslie, and Francis Anderson, *Members of Committee*. The Class of Members for

series of papers by Dr Charles Radclyffe Hall,—“On the Rise, Progress, and Mysteries of Mesmerism, in all ages and countries.” The writer has compiled with great industry, from the most approved authors, a digest of the alleged mesmeric phenomena, and probably will give his own (unfavourable) deductions at the end of the series. We may mention, also, some curious papers by Mr Braid of Manchester, in the *Medical Times* of 7th, 14th, and 28th December 1844, and 4th and 11th January, and 8th and 22d February 1845, on “Magic, Mesmerism, Hypnotism, &c. &c., historically and physiologically considered.”—In the same journal of 15th February and 1st March, and also in the *Lancet*, will be found a report of an instructive paper on “the Incubation of Insanity,” read by Dr Forbes Winslow before the London Medical Society, and of an ensuing discussion on the changes which the brain undergoes in mental disorders. The *Lancet* is publishing a highly interesting and valuable course of lectures on Diseases of the Brain and Insanity, delivered in the Salpêtrière, by M. Bailarger. The exposure, by this experienced physician, of the wretched state of the statistics of hereditary insanity, and his suggestions for collecting precise data, are particularly worthy of attention. A course of lectures on insanity, by Dr Conolly, is to follow in the *Lancet*. Scipion Pinel’s Treatise on Cerebral Pathology, of which a translation by Dr Costello is in the course of publication in the *Medical Times*, has, in our opinion, no distinguished merit.

the study of Practical Phrenology meets every week in the Museum. At the close of last Session, the Members of this class entertained the Secretary at supper in the Odd-Fellows' Arms Hotel, and presented him with a fine copy of Byron's Works, elegantly bound, and bearing a complimentary inscription. About twenty ordinary members have joined the Society during last year, and considerable additions have been made to the library.

J. S.

ABERDEEN, March 1845.

The late Henry T. M. Witham, Esq.—We grieve to record the death of this very estimable and intelligent gentleman, which took place on 28th November 1844, at Lartington near Barnard Castle, his family seat. Mr Witham resided a considerable time in Edinburgh, which he left about eight years ago. Though by no means a young man when he came to Scotland, and though his previous habits had been merely those of an English country gentleman, he devoted himself, from the time of his arrival, to scientific pursuits, and with no inconsiderable success. He became a member of the Royal Society of Edinburgh, and of the Wernerian and Phrenological Societies, of the Council of the last of which he was for several years a member. His cabinet of minerals and fossils, commenced while he was in Edinburgh, received many additions after his return to England, and must now be very extensive and valuable. His work on the structure of fossil vegetables is admitted by geologists to be a most important contribution to their science. In religion he adhered to the faith of his ancestors, and was a sincere Catholic, but without the smallest tincture of bigotry or sectarian feeling. In politics he was a steady Whig. At his death he held, we believe, the office of High Sheriff of the county of Durham. In private life he displayed the engaging qualities of an English gentleman; he was hospitable, frank, candid, courteous, a good landlord, a friend to the poor, a zealous promoter of every undertaking that held out a prospect of benefit to his neighbours or the public. The Mechanics' Institution at Barnard Castle, of which he was President, owes its origin to him, and its prosperous existence to his fostering care. On the last occasion of his meeting its members, he expressed the strong hope and desire that a fit and permanent building for their accommodation should be erected; and it has been announced, that, at a meeting held in Barnard Castle shortly after his funeral, to make arrangements for raising a monument to his memory, it was suggested that, as a merely monumental structure, inapplicable to purposes of utility, would be but little in accordance with the practical character of the charity of the deceased, an attempt ought to be made to gather, by subscription, a fund sufficient to erect for the institution a handsome building, which should be expressly dedicated and inscribed to his memory. A committee was appointed to effect this excellent purpose, and Mr J. C. Monkhouse, Bank Manager at Barnard Castle, consented to act as treasurer. The Duke of Cleveland has subscribed L.100, and the Bishop and Dean of Durham L.20 and L.25 respectively. While in Edinburgh, Mr Witham was one of the most regular attenders of the meetings of the Phrenological Society; and at Barnard Castle, in 1836, a class for the study and investigation of Phrenology was formed under his auspices, in connection with the Mechanics' Institution, he himself delivering a public lecture on the evidences and uses of the science (see *ante*, x. 245.) To his exertions, also, the establishment of an Infant School in Barnard Castle is to be ascribed.

Lectures on Phrenology.—In January, Mr C. Donovan of London delivered three lectures at the Literary and Scientific Institution, *Stratford-*

on-Avon ; In January and February, six to a class of subscribers, as many to a class of operatives, and eight to a select class in his own rooms, at *Leamington* ; and in March six lectures at the Mechanics' Institution, *Dublin*. The last of these courses was preceded by an introductory lecture on the advantages, social importance, and fundamental principles of Phrenology, of which we observe a laudatory notice in the *Freeman's Journal* of 4th March.—In December Mr E. T. Hicks delivered lectures on Phrenology and Mesmerism at *Loughborough* ; and in January Mr A. T. Chalmers lectured on insanity to the members of the Mechanics' Institution, *Derby*.—On the evenings of 4th and 5th March two lectures,—one on “Man phrenologically and metaphysically considered,” and the other on “the State of Adam and Eve in Paradise,”—were delivered before the members of the *Sheffield Phrenological Society*, by Mr David M'Taggart, surgeon, of *Halifax*. This Society, we may mention, has printed a diploma for honorary members, to serve as a testimonial of the skill and knowledge of such lecturers on Phrenology as may apply for, and, after due investigation, receive it. “Our attention,” says the Secretary, “was called to the growing necessity of something of this kind, by the fact, that an individual named Lundie, who, when lecturing here a short time ago, announced himself as a member of the Glasgow Phrenological Society, was in Mr Goyder's ‘Phrenological Almanac’ for 1845, subsequently issued, denied to be such.”

Manchester.—Mr Bally's display of phrenological casts, &c. at the late exhibition in the Mechanics' Institution, attracted much attention ; and so many heads of visitors were manipulated by him, that accuracy must have been in danger of being sacrificed to dispatch.—On 7th February, Mr Turner, Honorary Professor of Anatomy and Physiology at the Royal Manchester Institution, delivered there the sixth of his course of lectures on Man, noticed in our last volume, p. 211. The present lecture was “on the signs of the emotions of the mind, and the influence of education in directing and controlling the moral feelings and the intellectual character of man.” The audience was even larger than on former occasions, and many ladies, especially heads of families, were present. The lecture is reported at great length in the *Manchester Guardian* of 12th February, from which we extract the following advice on the choice by parents of a profession for their sons :—“Mr Turner proceeded to say, that in his last lecture, after giving a detail of educational procedure, he concentrated their views of education mainly upon the cultivation of a great principle inherent in man—the will. He was persuaded that we took too limited a view of what was meant by will. If you ask in a general way what is the will, what is volition, what will be the reply ? ‘I will to move this paper’ (taking a paper in his hand.) It is a something which emanated from his brain ; his muscles of the arm acted in obedience to that will, and the paper was moved. But was that will ? Yes : will is the penultimate effect of a series of mental operations leading to an act as a conclusion ; which act is immediately preceded by will. But, if we analyse the subject of will, we shall find that it comprehends a full investigation and inquiry into an acquaintance with the following conditions of mind—Sensation, the formation of ideas, associating, combining, comparing, and abstracting them ; experience, the due and proper exercise of the judgment or of reason ; motives of human action ; will, action. This, then, was the series of mental operations concerned in the formation and execution of will ; and, in inquiring into the real characters of men, we must consider as to whether the antecedents to the resolution arrived at, and to be carried out, are legitimate or not. We must inquire what is your motive ; then, if you have a motive, upon what grounds

is it formed. He would illustrate this practically. Suppose he had a son seventeen or eighteen years of age, and to whom he had given as good an education as was necessary, and whose proficiency, he was satisfied, would qualify him for some position in life; and that he said to him, 'Now, it is high time you should exercise your own opinion, and tell me what you would like to do with yourself. I give you your choice of a trade or profession, provided I find that you choose that which I think you can excel in.' He would always make that a condition. He would not be carried away by the caprice of the individual. He would ascertain his tastes and his qualifications. And how would he proceed to ascertain this? 'Well, what would you like to be?' would be the question. 'I should like to be a surgeon.' 'Why?' 'Because you are a surgeon.' 'That is no motive; that is not sufficient.' He should not say to his son, 'Well, then, you shall be a surgeon;' but 'No: let me first ascertain whether you have thought seriously of this.' 'Yes, very seriously; and I am of opinion, from what I have thought about it, that I should very much like to be a surgeon.' 'Well, upon what has your reasoning been founded?' 'Because I have some very interesting and agreeable associations with professional life. I have seen you perform an operation; or I like to go to the anatomical theatre, &c.; and I like the studies connected with medicine.' These are very good as antecedents. 'Have you put yourself in possession of proper ideas to enable you experimentally to think that your choice is right? and have you seriously considered this as your motive?' 'Yes.' Then the will or wish was the most legitimate, and he would gratify it. If a young man chose a commercial pursuit, he (Mr Turner) would examine him, or recommend him to be examined, precisely in the same way. He would not allow him to say, 'I will be a commercial man, a soldier, or a clergyman, because my uncle, or a relative, is of such a profession; or I will be a barrister, because Mr So-and-so is a barrister.' His will is not worth any thing, if so superficially arrived at. Some individuals would go further than this. Thus, our ingenious friend, Mr Bally, would go to the head, and say, 'I don't know whether you are calculated to be a surgeon or not; I will examine your head.' He would perhaps put his finger behind [above?] the ear, and feel the region of Destructiveness—(a laugh)—whether it was associated with Benevolence, and so on. Well, if he had got a very high amount of benevolence, without much courage, and so forth, he might not be perhaps fit to be a surgeon, according to his estimation. If he wished to ascertain his fitness for the church, he would look perhaps at the organ of Veneration. If for a commercial life, what would he look for? He supposed, in Manchester, the organ of Acquisitiveness would be required. Then, if a barrister, what would he look for here? Conscientiousness; yes, that was a very desirable element in law matters. But, however much individuals might be led away by these physical signs, he said, investigate fully the motives of the will; and, he felt persuaded, they would have here, generally speaking, an unerring guide as enabling them to form a judgment as to the position in which their sons should be placed in life with the best prospect of benefit to themselves and to the community." Either Mr Turner expressed himself with a great lack of precision, or his lecture is ill-reported in the newspaper.

Bethlem Hospital.—At a quarterly Court of Governors of the Royal Hospitals of Bridewell and Bethlem, held on the 18th November, "a report from a general committee, with a scheme for regulating the admission of two pupils from the Royal Hospitals of St Bartholomew and St Thomas, to attend the physicians of Bethlem Hospital, when receiving

and visiting the patients therein," was received and adopted. The scheme referred to will be immediately carried into operation; and the ample wards of Bethlem Hospital will thus become not merely the means of charity to the sufferers from cerebral disease, but of instruction to successive generations of the most intelligent and zealous pupils of the two other Royal Hospitals. The sharp eyes of intelligent pupils have also an admirable effect on the way in which the medical duties of every hospital—of such an establishment as Bethlem Hospital in especial—are performed. Large sums have lately been expended, and are still in the course of expenditure, at Bethlem, with a view to render the house a true *curative* establishment. What a different aspect has Bethlem now from what we remember it some twenty years ago! We visited it last week, and actually saw that in the whole of the immense building there *was not a single individual under restraint!* The exception used to be, to find an individual who was not in the strait-waistcoat.—*Medical Gazette*, 22d Nov. 1844.

M'Naughten, the Murderer of Mr Drummond.—We have heard, from the best authority, that this individual continues to manifest the same symptoms of insanity as were testified to upon his trial.—He still imagines that he is pursued by secret enemies, and has gone the length of throwing any missiles he could get hold of at the heads of his supposed foes. It is not a little singular that two persons confined in Bedlam who have suffered from M'Naughten's violence, should be Messrs Touchet and Dalmas; the first of whom shot at Mr Smith, the keeper of a shooting-gallery in Holborn, the other is the Battersea Bridge murderer. M'Naughten, in consequence of the violence he has displayed, has since been confined by a strait-waistcoat, or "muffle," as it is now called.—*Globe*, Feb. 1845.

Thomas Adams, the Flat-head Indian.—This individual, of whom an account is given by Mr Combe in his *Notes on the United States*, ii. 228, and in this Journal, xiv. 42, has fallen sadly into disgrace, as will be seen by the following extract from a letter which we received last October from a friend in New York:—"Captain Dewey has some interesting facts concerning Thomas Adams the Flat-head Indian. I requested him some time ago to write to you the particulars. He may have done so; if not, the summary may interest you. It is, that Adams, after having been paraded through our principal cities as a christianized specimen of a Flat-head Indian, and after much property had been obtained by this means to promote the Flat-head mission, was carried back to his home, installed as store-keeper to the mission, manifested an utter unconsciousness of the duties of his trust, made love to the squaws, married and single, bribed them with the property of the mission, lived as erotically as a Turk in his harem, called down upon himself the indignation of the 'heathen,' and had to fly for safety from the Indian village. Probably this Flat-head saint has suffered martyrdom ere this." We have not heard from Captain Dewey.

Dr Spurzheim on the relation between the languages of certain nations and their notions of time.—In Mr Cull's interesting and valuable communication on Language in your last Number, there occurs a misrepresentation (as I conceive) of the opinions of Dr Spurzheim, which I feel anxious to notice. In order to make the subject clear, I shall premise, in the words of Mr Cull, that "the circumstances of mode, time, person, &c., are expressed in some languages by terminations, which are fragments of words coalesced with the verb, and which, in grammar, are technically termed

tenses. In other languages, those circumstances are expressed by distinct uncoalesced words called auxiliaries and pronouns, which are grouped with the verbs in a phrase, and which, in the ordinary grammars, are, for the convenience of students, classified as and termed tenses, but which philologists do not consider to be tenses." "Dr Spurzheim," observes Mr Cull, "is in error when he cites the Greeks and French as having superior notions of time to the Germans and English, because they have a greater number of tenses;" and he afterwards states that the Doctor has fallen into this error from "not including the uncoalesced words of a phrase with the true tenses as time signs." Now, to maintain, where two nations have the same number of distinct modes of expression to express the same number of distinct ideas of time, that because in one nation the original monosyllables distinctive of time have coalesced with the verb and become one word, whilst in the other they have remained distinct, therefore the former nation evinces a more acute discrimination of time than the latter, appears to me a doctrine so monstrously absurd, that nothing but the most unequivocal evidence can warrant our attributing it to a man of Dr Spurzheim's ability, and whose work, "The Philosophical Principles of Phrenology," from which Mr Cull quotes, will ever remain a monument of the philosophic acumen of its author. No such construction is warranted by Dr Spurzheim's language, who, it appears to me, evidently uses the word *tense* in its common, and not in its restricted application; and who, in referring to the greater number of tenses in the Greek and French languages than in the German and English, refers not to the greater number of true tenses in the philological acceptation of the word, but to the circumstance that the two former languages recognise and discriminate by different modes of expression, *ex. g.* in their two past tenses *ἔγραψα*, *ἔγραψα*, and *frappois*, *frappai*, shades of distinction in time lost sight of and confused together by the latter under the single words *schlug* and *struck*.

SOUTHAMPTON, March 3. 1845.

T. S. PRIDEAUX.

The Scope of Education.—No question pertaining to education has been more discussed than its function—in other words, what it can do, and what it cannot do. Thomas Carlyle, in one of his quaint yet wise illustrations, seems to have hit upon the philosophy of the question. He says (*Sartor Resartus*, 2d ed., p. 110) that "It is maintained by Helvetius and his sect, that an infant of genius is quite the same as any other infant, only that certain surprisingly favourable influences accompany him through life, especially through childhood, and expand him, while others lie close folded and continue dunces. With such opinion I should as soon agree as with this other, than an acorn might, by favourable or unfavourable influence of soil and climate, be nursed into a cabbage, or the cabbage-seed into an oak. Nevertheless, I too acknowledge the all but omnipotence of early culture and nurture; hereby we have either a doddered dwarf bush, or a high-towering wide-shadowing tree; either a sick yellow cabbage, or an edible luxuriant green one." This illustration aptly conveys the true power of education. It is the trainer, not the creator; it can dwarf or enlarge the faculties; but it cannot make either a Shakespeare or a Newton. Never will education fulfil its mission until each boy receives that special training which accords with his natural character; and never will his capacities be known until the quality of his mind be gauged by Phrenology. Then we may expect to see education something else than a kind of respectable quackery; and the teacher will be contented with assisting, and cease to attempt to drive nature.

E. J. HYTCHE.

Dr Dalton's Colour-blindness and its Cause.—In our last Number, p. 54, we mentioned the rumour that no peculiarity had been found in the humours of Dr Dalton's eyes; adding, that we looked forward with some interest to the publication of a scientific report of the *post-mortem* appearances. Such a report has now been published, in an address delivered on 1st March to the Royal Medical and Chirurgical Society, by Mr Stanley, the president of that body, and inserted in the *Medical Times* of 15th March. "Dr Dalton," says Mr Stanley, "occasionally directed his mind to physiological subjects, and displayed in them the same turn for experimental inquiry and originality of thought as in the subjects of chemical and physical science. His papers on physiological subjects were published in the *Memoirs of the Literary and Philosophical Society of Manchester*. They are, an account of a peculiarity of vision in his own person, under the title of *Extraordinary Facts relating to the Vision of Colour*; also papers on *Respiration and Animal Heat, &c., &c.* The account of the discovery of the peculiarity of vision in his own person is thus given by Dalton. 'I have often seriously asked a person whether a flower was blue or pink, but was generally considered to be in jest. Notwithstanding this, I was never convinced of a peculiarity in my vision, until I accidentally observed the colour of the flower of the geranium by candle-light. The flower was pink, but it appeared to me almost an exact sky-blue by day; in candle-light, however, it was astonishingly changed, not having then any blue in it, but being what I called red. Not then doubting but that the change of colour would be equal to all, I requested some of my friends to observe the phenomenon, when I was surprised to find that they all agreed that the colour was not materially different from what it was by daylight, except my brother, who saw it in the same light as myself. This observation clearly proved that my vision was not like that of other persons. Reflecting on these facts,' continues Dr Dalton, 'it appears almost beyond a doubt that one of the humours of my eye is a coloured medium, probably some modification of blue; I suppose,' he adds, 'it must be the vitreous humour, otherwise, I apprehend, it might be discovered by inspection of the eye, which has not been done.' After his decease, these interesting observations, and the point which had been left for inquiry, were not forgotten. In obedience to Dalton's directions, an examination of his eyes was made by Mr Ransome, and his colleague, Mr Wilson, of the Manchester Infirmary, and with the following account of which Mr Ransome has very obligingly furnished me. 'On the cornea appeared the usual arcus senilis, but its centre was perfectly transparent, and free from any tinge of colour. The aqueous humour received from a puncture of the cornea into a watch-glass, was viewed by reflected and transmitted light, and found to be perfectly pellucid, and free from colour. The vitreous humour, with its hyaloid membrane, was also perfectly colourless. The crystalline lens was amber coloured, as is usual in old persons.' A vertical section at right angles to the axis was made in the other eye without disturbing the position of the crystalline, &c., and through this portion of the eye laid horizontally, some of the colours were examined which Dalton had been unable to distinguish, particularly red and green, with, Mr Ransome states, no appreciable difference to his vision. These results were transmitted to Sir David Brewster, who visited Mr Ransome for the purpose of examining the eyes, and they agreed that the imperfection arose from some deficient sensorial power, rather than from any peculiarity in the eye itself."

Respecting Dr Dalton's peculiarity of vision, a writer in the *British Quarterly Review*, No. I., says—"It consisted in this, that whereas most persons see seven colours in the solar spectrum, he saw only two—yel-

low and blue; or at most three—yellow, blue, and purple. He saw no difference between red and green, so that he thought ‘the face of a laurel leaf a good match to a stick of red sealing-wax; and the back of the leaf answers to the lighter red of wafers.’ When Professor Whewell asked him what he would compare his scarlet doctor’s gown to, he pointed to the leaves of the trees around them. Dalton found nearly twenty persons possessed of the same peculiarity of vision as himself. The celebrated metaphysician, Dugald Stewart, was one of them, and could not distinguish a crimson fruit, like the scarlet doctor’s gown, from the leaves of the tree on which it grew, otherwise than by the difference in its form. This failure to perceive certain colours is by no means rare, and has excited a great deal of attention. The continental philosophers have named it *Daltonism*, a name which has been strongly objected to by almost every English writer who has discussed the subject, on the ground of the inexpediency and undesirableness of immortalising the imperfections or personal peculiarities of celebrated men by titles of this kind. If this system of name-giving were once commenced, it is difficult to see where it would end. The possession of a stutter would be called Demosthenism; that of a crooked spine, Æsopism; the lack of an arm, Nelsonism; and so on, till posterity would come to connect the names of our celebrated men, not with their superior gifts, or accomplishments, or achievements, but with the personal defects which distinguish them from their more favoured fellows. Professor Whewell sought to better the matter by naming those circumstanced like Dalton, *Idiopts*, from two Greek words, signifying peculiarity of vision. But to this name it was justly objected by Sir David Brewster, that the important consonant *p* would be very apt to be omitted in hasty pronunciation, and so the last state of the idiopt be worse than the first. Others have suggested various terms of Greek derivation, such as *parachromatism*, none of which, however, are sufficiently distinctive. The name ‘colour-blindness,’ proposed by Sir D. Brewster, seems in every respect unexceptionable.”

Scottish Fishermen.—There can be little doubt that the great bulk of the fishers in Scotland—in some localities Celtic, in some Lowland—have a common origin with its other inhabitants. On the coast of Buchan, there seems, in accordance with the tradition, to be a mixture among them of Flemish breed; but to the north and south we find them decidedly Celtic where the other inhabitants of the district are so, and Lowland in every case in which these are Lowland. One half the eastern coast of Ross is inhabited, for instance, by the one race, and one half by the other; the one—the Lowland half—has its two fishing communities; the other—the Celtic half—has its some five or six. In the one, the forms, the language, the surnames of the fishermen are Lowland; in the other they are Celtic: the names most common in the two Lowland villages are, Mains, Jacks, Hoggs, Skinners, and Fiddlers; those most common in the others, Rosses, M’Lennans, M’Leods, and M’Kenzie. Of evidently the same race with the other inhabitants of the district, they should furnish, on the average, the same physical development; and yet it is a curious fact, that, with bodies robust and strong as those of their countrymen in general, *their heads are greatly smaller*. We have been informed by an intelligent draper, one of the magistrates of Cromarty, that in supplying with the several articles of his trade the fishermen of the three Celtic villages that lie on the low range of coast between the precipitous hill of Nigg and the promontory of Tarbetness, he had almost invariably to order for them boys’ hats. The brain, deprived of its proper exercise for ages, has shrunk

far below the average standard of Scotchmen.—*North British Review*, No. II.

Relapse of convicts into crime.—In the Chaplain's Report of the Preston House of Correction, presented at the October Sessions 1844, the following remarks are made on "relapse into crime." They strikingly exhibit the necessity for a system of national education. "The majority of these cases," says the writer, "refers to the young; and I need scarcely again repeat observations, which I have too often had occasion to make in former Reports, as to the difficulty of reforming a child who has been born and reared amidst poverty, neglect, and ill example. The evil which had grown with his growth and strengthened with his strength cannot be remedied by the discipline proper to a jail; nor within the term of imprisonment usually assigned to the (perhaps trifling) crime in which he has been detected. The first offence of a young criminal is generally followed by a sentence intended to check and to warn. The check is provided by a month's seclusion, and by a corporal chastisement suited to the age of the child; the warning is given from the bench, and afterwards reiterated, almost daily, to the offender in his cell, that the commission of a second crime will be certainly followed by a sentence of transportation. This check and warning, where there has been some previous religious training, and where parents have been willing to assist in the reformation of their child, are found effectual,—at least in preventing a relapse into crime; but they are otherwise when these conditions are wanting; and in such cases nothing can cure the deep-seated demoralization but a long course of mental and religious education. In such cases the child should be separated from bad companions until they are entirely forgotten, or remembered only with disgust; every injurious influence should be kept away from him; the powers of his mind should be roused; his affections should be cultivated; religious knowledge and religious principle should be engrafted, not merely as something to be occasionally referred to, but as the ever present guide through every hour of his life. All this, it is manifest, cannot be accomplished in a prison. The utmost that can be done there, during the short sentence to which the young culprit is subjected, is the impressing him with a dread of the penal consequences of crime. It may be said, that an education is here contemplated for the little outcast felon, attainable, at present, by few children belonging to a less degraded class. I can only reply, that such an education ought to be given, and when the country has a clearer perception of its duty and its interest, will be given, to all children; and especially to those who, without it, are sure to grow up in brutality and crime, miserable and degraded in themselves, a disgrace and a peril to the community."

Heads of the Inhabitants of the Pyrenees.—Mr Masterton, in a paper on the inhabitants of the Pyrenees, read before the London Ethnological Society on 24th January 1844, described those of Verneh des Bains as "long-heads," a very few round heads being found amongst them. They differ widely from the Basques, are industrious and moral, of short stature, and swarthy complexion. Intermarriage of near relations is frequent, and with no unfavourable results. The goitre and cretinism is common in the country.—*Report in the Medical Times*, Feb. 3. 1844, p. 310. [May not cretinism be an "unfavourable result" of the intermarriage of near relations?]

Brain of the Giraffe.—At a meeting of the Paris Academy of Sciences on 12th February 1844, a communication was received from M. Joly of

Toulouse, and M. Lavocat, of the veterinary school of that town, on the anatomy of a giraffe which died there a short time ago. The most remarkable facts noticed by them are the extraordinary length of the digestive tube of this animal, which measured about 200 English feet, and the great volume and numerous circumvolutions of the brain. The weight of the brain in the animal dissected by them was 710 grammes, about a pound and a half English. In volume it exceeds that of the ox or the horse.—*Athenæum*, 20th Feb. 1844.

Are the Nerves conductors of Electricity to the Muscles?—Drs A. Longet and C. Matteucci, in a memoir read before the Academy of Sciences at Paris, and published in the *Medical Times* of 26th October 1844, conclude from their late experiments, "that no proof exists, confirmatory of the hypothesis which admits the presence of an electric current in the nerves of living animals—an affirmation to which they were led by former experiments."

Books Received.—Letters on Mesmerism. By Harriet Martineau. London: E. Moxon, 1845. 18mo, pp. 70.—Medical Report of the Case of Miss H—— M——. By T. M. Greenhow. London: S. Highley, 1845. 8vo, pp. 24.—The British and Foreign Medical Review, No. xxxvii., Jan. 1845.—The Zoist, No. viii., Jan. 1845.—Fifth Report of the Crichton Royal Institution for Lunatics, Nov. 1844.—The New Moon; or Crichton Royal Institution Register, Nos. ii., iii., and iv.—Report of the County Lunatic Asylum, Forston, Dorset, 1845.—Report of the Royal Edinburgh Asylum for 1844.—Address delivered to the Liverpool Mental Improvement Society of the Liverpool Mechanics' Institution, at the opening of the Session 1845. By W. B. Hodgson, Principal of the Institution, and *ex-officio* President of the Society.—General Report of the Royal Hospitals of Bridewell and Bethlem, &c., for 1844.—Letters on Animal Magnetism. By Miss Crumpe. Edinburgh: 1845. 8vo, pp. 24.—The American Journal of Insanity, Nos. ii. and iii., Oct. 1844, and Jan. 1845; edited by the Officers of the N. Y. State Lunatic Asylum, Utica.—The Medical Times, weekly.

Newspapers Received.—Leicestershire Mercury, Dec. 31.—Manchester Exhibition Gazette, Dec. 21, 28; Jan. 25.—Manchester Guardian, Jan. 8; Feb. 12, 26; March 8.—Nottingham Review, Dec. 20, 27.—Derby Mercury, Jan. 29.—Freeman's Journal, March 4.

To Correspondents.—Mr Hytche's paper on Acquisitiveness will be inserted as soon as convenient. An article on Persecution for Religious Opinion, occasioned by last Number of the Zoist; and notices of several publications, including the 6th and later Nos. of the German Phrenological Journal; are postponed for want of room.

Communications for the Editor (prepaid) may be addressed to Mr ROBERT COX, 25 Rutland Street, Edinburgh. Books or parcels, too heavy for the post, may be left (free of expense) with the London publishers, Messrs Simpkin, Marshall, & Co., Stationers' Hall Court.—Articles intended for the next following Number must always be with the Editor *six weeks before the day of publication*. Communications for the section of "INTELLIGENCE," and also Advertisements, should be in hand at least a fortnight before the same day. Charges for advertising:—Eight lines, 6s.; twelve lines, 7s. 6d.; every additional line, 6d.; half a page, 14s.; a whole page, 25s. Advertisements may be sent to the publishers in Edinburgh or London.

EDINBURGH, 1st April 1845.

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NEW SERIES.—No. XXXI.

I. MISCELLANEOUS PAPERS.

- I. *Contributions towards a more exact and positive Knowledge of the Organ named Language, and its Functions.* By Mr RICHARD CULL.

(Concluded from p. 138.)

The relation of the size of the organ of Language to the power of using our native language, and also to the facility of acquiring any amount of the text of an author by heart, is admitted. It is a desideratum to point out the sphere of action of the organ in the acquisition of a foreign language, and especially to determine the source of the talent, 1st, for acquiring the spirit of a language, and, 2d, for philology. It is necessary, however, to make some preliminary statements concerning both language and grammar.

The phonetic or spoken language of a nation is a system of arbitrary vocal signs for the objects, events, relations, &c., with which the nation is acquainted. The nation's graphic or written language is a complete system of arbitrary written signs for the arbitrary vocal signs. The written signs are, therefore, two degrees removed from the objects, events, &c., which are named by the vocal signs. The vocal signs are addressed to the ear, the written to the eye. The arts of reading and writing are the arts of converting the written language to the phonetic, and the phonetic to the written, respectively. Children acquire the phonetic part of their native language first, and speaking precedes reading.

In acquiring a language by means of books, as the Latin,
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we arrive at the phonetic through the written language. A foreign language, as the French, can be acquired without books, as is done by illiterate persons visiting and remaining in France. Such a person acquires the words and phrases of the language from the first, as actual names of the objects, events, relations, &c., which fall under his observation. And in the application of his lingual knowledge the word does not present itself as an equivalent to another word in his native language, but as an actual name of the object, event, &c., as the case may be; just as the equivalent word occurs to him as a name in his native language.

A man who acquires a foreign language by books, does not acquire the words and phrases as names of objects, events, &c., but as equivalents to certain words and phrases in his native language. In acquiring these equivalents, however, he has the advantage of an ordered and systematic arrangement to facilitate his labour. Hence his knowledge of the names of objects, events, &c., is obtained by an entirely different procedure from his, who acquires them without books. And in the application of his lingual knowledge the word presents itself not as an actual name of the object, event, &c., but as an equivalent to a word or phrase in his native language. It may be remarked, that the word for a long time presents itself to his mind encumbered with the grammatical rules to which it is subject.

The distribution of the words of a language into distinct classes according to their functions in discourse, with the rules to which each class is subject, and with the nomenclature of the whole, is a grammatical machinery which facilitates the acquisition of that language. This machinery is often confounded with the language. The following illustration is intended to exhibit the distinction. An uneducated German knows as well as an educated one, the meaning of the sentence—"Der Fürst gab dem Feldherrn den Degen,"—"The prince gave the sword to the general." The educated German is able to parse, *i. e.* to distribute the several words to their classes under the great grammatical division Etymology, and to state the rules for putting the words together to construct a sentence, *i. e.* the rules of Syntax. The uneducated German knows nothing of this machinery, or of its nomenclature. A language, therefore, and its grammar, as a system of technical knowledge, are distinct things. The Chinese language has no grammatical forms; and in the sense of alphabetical languages it has no grammar.

A language is an object in relation to the organ of Verbal Memory; but its grammar is an object in relation to other

organs. Thus, it is an act of verbal memory to remember that the German word *Fürst*, is an equivalent to the English word *prince*; it is an act of the judgment to determine the grammatical class of words to which the word *Fürst* belongs. The knowledge which is necessary to this act of judgment, and the successive steps in arriving at it, will occur to the reader.

Each organ of the intellect remembers its objects, independently of the names of the objects. Many persons are painfully made aware of this fact, by an occasional failure of the memory of the appropriate word, although the object itself is present to the mind. Shakspeare gives a remarkable instance of such a failure of memory.

“*Hotspur.* * * * *

In Richard’s time,—What do you call the place?—

A plague upon ’t!—it is in Gloucestershire;—

’Twas where the mad-cap duke his uncle kept;

His uncle York;—where I first bow’d my knee

Unto this king of smiles, this Bolingbroke,

When you and he came back from Ravenspurge.

Northumberland. At Berkeley castle.

Hotspur. You say true.”

First Part of King Henry IV., Act. I., Sc. 3.

Hotspur forgets the name of the castle, although he remembers its locality and several circumstances connected with it, the recital of which is sufficient for Northumberland to give him the forgotten word.

Each organ of the intellect remembers its own objects, but is unable to remember those of any other: thus, the organ of Colour solely and exclusively remembers colours; Number, numbers; and so on. Hence, the doctrine of special function teaches that every word and phrase which is acquired in the study of a foreign language is remembered solely and exclusively by the organ of Verbal Memory. It must be borne in mind, that whether the act of verbal memory be the result of spontaneous activity of the organ, or of an activity which is produced by association, it is still the organ of Verbal Memory which remembers the word or phrase.

The following sketch of the acts of the intellect in the acquisition of a language by grammar, will indicate the kind of aid which other organs give to that of Verbal Memory in so acquiring a language. The organ of Verbal Memory connects the word with the object, event, relation, &c., as its name; as the word *prince* or *Fürst*, with the object so named. It connects the word *substantive* with the class of words which name objects, existences; the word *verb*, with

the class of words which name events, conditions ; and the word *particle*, with the class of words which name certain relationships of objects and events.

The principles by which words are thus classified are remembered by the memory of principles ;—thus, by the memory of a principle we remember that Latin substantives whose genitive case singular ends in *æ*, are declined like *musa* ; while the declension itself is remembered by the organ of Verbal Memory. It is also by the memory of principles that the three concords are remembered ; but the gender, case, and number of the substantives, and the voice, mood, tense, number, and person of the verbs, depend on Verbal Memory. The doctrines of quantity and metre are remembered as principles ; the names of the doctrines, by Verbal Memory.

The memory of grammatical principles depends on the reflective powers : the memory of the examples in illustration depends on Individuality and Comparison : the memory of the language in which the principles and the examples are couched depends on Verbal Memory. The application of this grammatical knowledge to practice depends, *1st*, on perceiving the occasions for it ; and, *2d*, on a readiness in bringing it to bear.

The classical examination papers of our schools and colleges are designed to test the student's knowledge of the Greek and Latin languages. They, however, test something more than the mere verbal memory. The questions in those papers may all be ranged under three heads, viz.—1. Translation ; 2. Grammar ; and, 3. Subject-matter of the author translated. I subjoin examples under each head, taken from the Cambridge general examination for the B.A. degree, not for honours, of 1843, which is an average one.

1. *Translation.* The Greek book selected was Xenophon's *Memorabilia* ; the Latin, Cicero's *Orations*. The translation into English of the Greek and Latin extracts selected from these books is an exercise of Verbal Memory.

2. *Grammar.* “ Decline the nouns *δύω, βούω, κρέασι*, Write down the positive and superlative degree of *πλείω* and *χειρόν*. Explain the formation of verbal adjectives :—form them from the verbs *ποιέω, πίνω*. Explain fully the meaning of the words *ἀνοχας, σπονδάς* ; and give the verbs from which they are derived. What is the derivation of *ἡνιοποιεῖν* ?” To answer these questions, the memory of principles and of examples is exercised along with Verbal Memory.

3. *Subject-matter.* “ Where did Lycurgus die ? In what Olympiad, and how many years before Christ, did Socrates flourish ? Why was Delos called by Ovid *Erratica Delos* ?”

The Verbal Memory plays but a subordinate part in answering such questions.

The study of systematic grammar associates the words of a language with grammatical principles and distinctions. A result of grammatical study, therefore, is to place a new series of objects in relation to the words of a language. And this enables those objects to suggest words to the mind, on the well-known principle of association. The power of the mind to suggest verbal signs is increased, and the organ of Verbal Memory is aided in the acquisition of languages.

A lingual student, however, after studying the best Grammars and Lexicons, is impressed with the fact, that he cannot acquire an accurate knowledge of a language, unless he acquires an accurate knowledge of the ideas and sentiments of the people who speak it. He cannot adopt a word as a name, until he knows what it names. He finds that a knowledge of things is necessary to a knowledge of names. Hence, the linguist should know the arts, sciences, history, law, polity, customs, &c. of the people whose language he studies. And he finds that, only in proportion to his knowledge of those things, is his knowledge of the language precise. This has led to an investigation of the words of a language in relation to the means of acquiring a knowledge of their signification. And the following able classification by Dr Campbell is the result.

1. Those words which perfectly correspond to words in another language.

2. Those which imperfectly correspond.

3. Those which have none corresponding to them.*

1. The words which perfectly correspond to words in another language are the names of natural physical objects, qualities, events, actions, conditions, family relationships, numbers, &c. Thus, *ἥλιος* = sol = sun ; *σελήνη* = luna = moon ; *ἄστρον* = stella = star ; *ἵππος* = equus = horse ; *ὕδωρ* = aqua = water ; *σκληρός* = durus = hard ; *μαλακός* = mollis = soft ; *μέλας* = niger = black ; *βαδίζω* = ambulo = to walk ; *καθεύδω* = dormio = to sleep ; *πατήρ* = pater = father ; *ἰός* = filius = son ; *εἷς* = unus = one ; *δύο* = duo = two ; *πρῶτος* = primus = first ; *δεύτερος* = secundus = second.

2. Those words which imperfectly correspond to the words of another language are the names of the productions of the mechanical and the fine arts, of the emotions and conditions of mind in regard to morals, religion, customs, politics, laws,

* Dissertation on Language, prefixed to Campbell's Gospels, vol. i. p. 82, *et seq.*

&c. The English words *house*, *ship*, *bed*, and *book*, correspond but imperfectly to the Latin words *domus*, *navis*, *lectus*, and *liber*, and to the Greek words ἵκος, ναυς, κλίνη, and βιβλίον; since the things so named differ in all but their uses. Hence a knowledge of the things themselves is necessary to a right apprehension of allusions to them. Thus, the thing named by the Greeks βιβλίον was a long scroll of parchment with a wooden roller at each end, and of which, in general, only the inside was written upon; so that βιβλίον and *book* are not perfect equivalents. Now, with this knowledge, the two following passages may be understood. . . . "A book (βιβλίον) written within and on the backside." (*Revelation*, chap. v., verse 1.) "And the heaven departed as a scroll (βιβλίον) when it is rolled together." (*Ibid.*, vi., 14.)

Every Latin tyro knows that the English word *virtue* is adopted from the Latin *virtus*; and he also knows that it bears a different sense. The Latin word *pius* is adopted into the English language; but the word *pious* only partially corresponds to it. The English word *sanctity* is equivalent to the Latin word *sanctitas*, as adopted by ecclesiastical writers, and in the Vulgate; but we have no word properly corresponding to it in the sense adopted by classical writers. "Æquitas," says Cicero, "tripartita dicitur esse. Una ad superos deos, altera ad manes, tertia ad homines pertinet; prima pietas, secunda *sanctitas*, tertia justitia nominatur." (*Topica*.) The English word *king* corresponds to the Latin *rex*, so far as it names the chief officer of the realm; but it differs from it as widely as the rights and duties of an English king differ from those of a Roman rex.

3. The words which are the names of weights, measures, coins, rites, garments, exercises, diversions, offices, sects, parties, &c., peculiar to a people, can have no other words corresponding to them in another language.

It may be remarked that the equivalents to the words contained in the first class can be obtained from the lexicon. The words of the second class can also be found in the lexicon, but only in a loose or imperfect sense; and an extensive reading of good authors in the language is required to ascertain their precise meaning. The third class may be regarded as the technical words of the various institutions and customs of the people; and their signification can be accurately acquired only by learning the details of those institutions and customs.

There is a class of words which, from their construction, are apt to mislead a student; viz., those compound words which do not express the combined meaning of their parts.

The word *bookbinder* has the meaning of book + binder; *table-cover*, of table + cover; in Greek, φιλογονία, of φιλέω + γένος: but the word *bookworm* = book + worm has not the signification of book + worm, it being an epithet which is applied to a book-studious person; so, in Greek, φιλοσοφία has not the signification of φιλέω + σοφία, although that is the construction of the word. The precise meaning of many compounds can be acquired only by extensive reading.

An idiom (ιδίωμα) is "a mode of speaking peculiar to a language or dialect." (*Johnson's Dict.*) The idioms of a language may be conveniently considered as of two kinds; viz., 1. Those which are idioms to foreigners; and, 2. Those which are idioms to natives.

1. Those which are idioms to foreigners. An Englishman learning the French language finds that the verb *avoir* = *to have*, is adopted in many cases where the English adopt the verb *to be* = *être*; as in the sentence "I am hungry" = "J'ai faim." This use of the verb *avoir* he is informed is a French idiom. And, on the other hand, the use of the English verb *to be* is an English idiom to a French student of our language. The verb *avoir* = *to have*, requires a substantive, and the verb *to be* = *être*, an adjective. Did the organ of Individuality, which is large in the French, originate their form of expression? Let us further examine this expression. "J'ai faim" = "I am hungry," in expressing the feeling of hunger; but the several words of the phrase are not equivalent to each other. *Je* = *I*, *ai* is not = *am*, and *faim* is not = *hungry*; yet "J'ai faim" = "I am hungry." The Verbal Memory remembers the French equivalents to each of the words of our own language; it remembers also the French phrase-equivalents to our phrases. Idioms are forms of expression. Are they modes also of thought? If idioms are modes of thought, then the French regard the feeling of hunger as an entity, and the English regard it as a condition; and each nation embodies its opinion in its phrase. It is difficult to conceive a phrase thus to originate, without assigning more philosophical acumen than is commonly met with in the formation of ordinary language. It is equally difficult to suppose the continuance of the phrases to involve a maintenance of the respective opinions. On the hypothesis that such phrases do involve recondite opinions and modes of thought, will it help us to a solution of the question, as to the source of the talent for acquiring idioms? By a careful study of the separate signification of the words of an idiom, we may commonly arrive at some recondite thought. But, practically, do those who readily acquire idioms analyse

them to seek the deeply concealed thought? It will be found on inquiry, that they do not; and the majority of linguists with whom I am acquainted, have not analysed them. It does not appear to me that the investigation of the idiom will assist the student in remembering the idiom to be equivalent to the English phrase "I am hungry;" because it is not a matter of investigation which is to be remembered, but a sentence which is to be remembered as an equivalent to another sentence. Hence I consider that the organ of Verbal Memory remembers the idioms of foreign languages.

There are certain proverbs, adages, and other forms of speech, which may be properly classed with the idioms of a country. Thus, the English express the notion of beginning a thing at the wrong end, by the phrase, "To put the cart before the horse;" and the French adopt a parallel phrase to express the same notion—"Mettre la charrue devant les bœufs."

2. Those which are idioms to natives. These consist, 1st, Of certain anomalies of grammar: irregularities of inflexion are not idioms. 2d, Certain phrases where the sentence as a whole is significant, but in which the component words lose their signification; as in the phrases, "How do you do?" "Pretty well, thank you." 3d, Certain admitted forms of speech which are illogical; as "Nobody is in the room," which is readily understood, but which is nonsense. The idioms of our native language are acquired in childhood, without knowing them as such; and we do not always detect them in after life.

The organ of Verbal Memory is the only organ which remembers words. It remembers all the words in those foreign languages which we acquire, together with all the phrases. It remembers all the peculiarities of a language in knowing the language, and hence it is the source of a taste for, and capacity to acquire, the spirit of language; the term "spirit of a language" being adopted to express the sum-total of the peculiarities in any given language.

Those objects which attract a man's attention, which he easily remembers, which continually occur to his mind, will absorb his thoughts and become objects of his study. Persons endowed with a large organ of Number are attracted by number; they revel in numbers and make them special objects of study. Those endowed with a large organ of Melody are similarly absorbed in music. These facts point to a theory of the talent for philology. In all philologists the organ of Language, as indicated by the eye, is largely developed, and there co-exists an ample development of the

intellectual organs. The large organ of Language gives a desire for, and ability to acquire, languages. A knowledge of languages presents a mass of facts, which the intellect studies; and philological knowledge is the result.

II. *Instances of Successful Moral Treatment of Criminals.*

In our last Number we gave an account of the actual condition of the convicts in New South Wales and Norfolk Island, and presented a sketch of a plan for the improvement of their whole treatment, recently suggested by Captain Maconochie, R.N. It is founded on the principle of substituting moral and intellectual motives for those furnished by physical force and severe punishments. As the public mind has not yet generally recognised the advantages of the proposed changes, and as the subject is one of vital importance to the welfare of the country, as well as to that of thousands of our convict fellow-creatures, we shall now describe two institutions in which principles essentially the same as those recommended by Captain Maconochie have been tried in practice, and been crowned with gratifying success.

At the village of Horn, near Hamburgh, there is a house of refuge for juvenile offenders of both sexes, named Das Rauhe Haus. It consists of several plain inexpensive buildings, situated in a field of a few acres, without walls, fences, bolts, bars, or gates. It is supported by subscription, and the annual cost for each individual in 1837, when we visited it, was L.10, 4s. sterling. It then contained 54 inmates, of whom 13 were girls. A portion of them were offenders who had been condemned by the courts of law for crimes, and suffered the punishment allotted to them in the house of correction, and who afterwards, with the consent of their parents, had come voluntarily to the institution for the sake of reformation. Another portion of them consisted of young culprits apprehended for first offences, and whose parents, rather than have them tried and dealt with according to law, subscribed a contract by which the youths were delivered over for a number of years to this establishment for amendment. And a third portion consisted of children of evil dispositions, whose parents voluntarily applied to have them received into the institution, for the reformation of their vicious habits. Among this last class we saw the son of a German nobleman, who had been sent to it as a last resource, and who was treated in every respect like the other inmates, and with marked success. The inmates are retained, if necessary, till

they attain the age of 22. They are instructed in reading, writing, and religion, and are taught a trade. There is a master for every twelve, who never leaves them night or day. The plan of the treatment is that of parental affection, mingled with strict and steady discipline, in which punishments are used for reformation, but never with injurious severity. The teachers are drawn chiefly from the lower classes of society; and the head manager, Candidat Wicher, an unbeneficed clergyman, himself belonged to this class, and thus became thoroughly acquainted with the feelings, manners, and temptations of the pupils. When we visited the establishment, he possessed unlimited authority, and shed around him the highest and purest influences from his own beautifully moral and intellectual mind. He mentioned that only once had an attempt at crime been projected. A few of the worst boys laid a plan to burn the whole institution, and selected the time of his wife's expected confinement, when they supposed that his attention would be much engaged with her. One of them, however, revealed the design, and it was frustrated. There are very few attempts at escape; and when the reformed inmates leave the establishment, the directors use their influence to find for them situations and employments in which they may be useful, and exposed to as few temptations as possible. The plan had been in operation for four years, at the time of our visit, and we understand that it continues to flourish with unabated prosperity.

The other instance of the successful application of Captain Maconochie's principles is afforded by "La Colonie Agricole et Penitentielle de Mettray," about four and a half miles from Tours, in France. It is described in the *Journal de la Société de la Morale Chrétienne*, for September 1844, and is contrasted by Captain M. with his own system, in an appendix to the documents which we formerly analysed.

It was founded in 1839, for the reception of young delinquents, who, under a special provision to that effect, are acquitted of their offences (as our lunatics are) *comme ayant agi sans discernement* (as having acted without discernment), but are sentenced to specific periods of *correctional discipline* before their final discharge. It was founded, and is still to a considerable extent maintained, by voluntary contributions—one benevolent individual, Count Leon d'Ourches, having endowed it during his lifetime with 150,000 francs, and the King and Royal Family, the Ministers of the Interior, of Justice, and of Instruction, with many public bodies and private individuals, having also liberally contributed.

The principles of management are the following:—

1. A *social* or *family* spirit (*esprit de famille*) is sedulously instilled into the pupils, as opposed to the selfish or merely gregarious spirit usually created in large assemblies of criminals.

2. For this purpose, the boys are divided into small sections or families, with common interests and tasks.

3. In all other respects they are placed in circumstances as much as possible resembling those of free life; and are led to submit to the strict order, obedience, and other discipline imposed on them, by appeals to their judgment, interests, and feelings, rather than by direct coercion. Corporal punishment, in particular, is avoided in regard to them.

4. A carefully impressed religious education is given to them, with as much purely intellectual culture as may comport with their proposed future condition as labourers. Reading, writing, arithmetic, linear drawing, and music, are considered to constitute the requisite branches.

Lastly, Their employments consist chiefly of those connected with agricultural and country life; a strong wish being entertained that they should settle to these on being discharged, rather than return to dense societies.

Before coming to this institution, the boys undergo a rigorous penitentiary discipline in the central prisons, to which they much dread returning. Without this, the fatigue and moral restraints imposed on them by the directors, would make them desire to return to their idle and comparatively comfortable life in the common prison. Expulsion, and, in consequence, a return to the severe penitentiary discipline, is the greatest punishment which is inflicted, and it is sufficient. There are a head-master and two assistants, and a separate house for every forty boys. "The boys are further divided into four sections or sub-families, who elect every quarter an elder brother (*frère aîné*), who assists the masters, and exercises a delegated authority under them. We attach much importance," say the directors, "to his situation being thus made elective. Knowing the boys as we do, we can tell the dispositions of each section from its choice."

The labour imposed on the inmates is all useful. "In England they use crank and tread-wheels for exercise; but our criminals universally object to this, and express great indignation at being set, as they call it, 'to grind the air' (*moudre l'air*). We find it of much importance that our occupations, whether ordinary or for punishment, produce a sensible result." There is equal humanity and reason in this

observation. Criminals can be reformed only by strengthening their moral and intellectual faculties; and "grinding the air" on tread-mills, whatever effect it may produce on the calves of their legs, seems little calculated to improve their brains. The tread-mill, by not only dispensing with, but absolutely excluding, all thought and moral feeling, and exhausting both mind and body in sheer aimless fatigue, is calculated first to exasperate, and ultimately to blunt whatever little mental power the individuals may have carried with them into prison.

"Before inflicting any punishment," continues the Report, "we are very anxious both to be perfectly calm ourselves, and to have the culprit toned down to submission and acquiescence in the justice of our sentence." "On grave occasions we also frequently assemble a jury of his companions to hear and decide on his case, reserving to ourselves only the right of mitigating any punishment awarded by them. *It is remarkable that these young people always err on the side of severity.*" Captain Maconochie highly approves of "Prisoner Juries" for the trial of prisoners, as calculated to interest the body of them in the administration of justice, to break down their otherwise natural opposition to it, and to assist in attaining truth. "They should, however," says he, "judge only of the fact, and not of the fitting sentence on it. *All rude minds are inclined to severity.*" The greater harshness, he adds, of naval and military officers who have risen from the ranks, compared with those who have always held an elevated position, "*is proverbial.*" The principle involved in this fact extends through every branch of society. The excellent but stern moralists who, in the social circles of life, in parliament, and at public meetings, advocate severe punishments, are, in this respect, "rude minds." There is in them a lurking element of resentment and revenge, which, however restrained in their general conduct in society, prompts them, unconsciously to themselves, when they come to think of criminals, to distrust the efficacy of moral treatment, and to exaggerate the advantages of severe inflictions.

In the Mettray Institution, "we use the cell to prepare for our other influences, to enable our pupils to recover from the turbulence of excited feeling, and sometimes also to lay a foundation of instruction, when little aptitude for it is exhibited amidst a crowd. It is in a cell, too, that religious impressions are most easily and certainly conveyed, and that first habits of industry may be formed." Captain Maconochie entirely subscribes to this opinion, provided that the time

thus spent be not too long, and that this treatment be not considered as capable of constituting a complete moral course.

"From the second year of our establishment, we think that we may say that vice had become unpopular, and the bad were under the influence of the good." "The cause of our success has been the application of two fruitful ideas—the substitution of a *domestic* or *family* spirit in our pupils, instead of one proceeding from mere gregarious association, and *the seeking from moral influences the restraints which other systems look for in walls, bolts, chains, and severe punishments.*"

The result of this treatment is stated thus:—"The institution has received in all 411 children, of whom 102 have been discharged. Of these latter, 4 have been re-convicted (June 1844); 1 has been apprehended and awaits a new trial; 6 are considered only of middling conduct; but 79 are irreproachable. Of the remaining 12 nothing is known."

It is impossible, by any commentary, to add to the importance and eloquent impressiveness of these simple facts. Capt. Maconochie considers the reformatory processes to be equally applicable to adult as to young offenders. It is certainly not asking too much from our Legislators and Prison Board Commissioners that they will at least *try* the system of "moral influences," which, in other countries, has been found to be so much more efficacious than "walls, bolts, chains, and severe punishments." They cannot be wedded to severity for its own sake; and for every useful object it has hitherto been employed in vain.

The principles of convict treatment developed in our last publication are applicable also to prisoners under sentence in common jails, bridewells, and penitentiaries; and as they could be introduced on a small scale, and at a trifling expense, into one or more of the home prisons, we hope that the Government may be induced to give them a fair trial. The sentence should be to imprisonment—not for so many days, months, or years, but until a certain sum be redeemed by the labour, attended by the good conduct, of the prisoner. The leading object should be to cultivate habits of moral and intellectual activity and self-restraint, by an appeal to the interest and understanding of the offender,—rather than by regulations enforced merely by the lash or other forms of suffering, leaving the will unmoved, or in a state of hostility to the discipline imposed.

GEO. COMBE.

III. *An Inquiry into the Distinctive Characteristics of the Aboriginal Race of America.* By SAMUEL GEORGE MORTON, M.D., Author of "*Crania Americana*," "*Crania Ægyptiaca*," &c.*

Ethnography—the analysis and classification of the races of men†—is essentially a modern science. At a time when Nature in her other departments had been investigated with equal zeal and success, this alone remained comparatively neglected; and of the various authors who have attempted its exposition during the past and present centuries, too many have been content with closet theories, in which facts are perverted to sustain some baseless conjecture. Hence, it has been aptly remarked, that Asia is the country of fables, Africa of monsters, and America of systems, to those who prefer hypothesis to truth.

The intellectual genius of antiquity justly excites our admiration and homage; but in vain we search its records for the physical traits of some of the most celebrated nations of past time. It is even yet gravely disputed whether the ancient Egyptians belonged to the Caucasian race or to the Negro; and was it not for the light which now dawns upon us from their monuments and their tombs, this question might remain for ever undecided. The present age, however, is marked by a noble zeal for these inquiries, which are daily making man more conversant with the organic structure, the

* This valuable and elaborate contribution to ethnology and mental philosophy has already been twice printed at Philadelphia, and is here reprinted from the second edition, of which the highly respected author has favoured us with a copy. His prefatory note, dated July 1. 1844, is in these words:—"The following essay was read at the Annual Meeting of the Boston Society of Natural History, on the 27th of April 1842, and published by direction of the society. In the present edition I have made a few verbal corrections, and added some collateral facts in an appendix. I have taken a rapid glance at what I conceive to be the peculiar traits of the aboriginal race of America, as embraced in five principal considerations, viz.: their organic, moral, and intellectual characters, their mode of interment, and their maritime enterprize; and from these I have ventured to draw a few definite conclusions. I am aware that it may appear presumptuous to attempt so wide a range within the brief limits of the present occasion, especially as some points can be touched only in the most general manner; but my object has been to dwell rather upon some of these which have hitherto received less attention than they obviously deserve, and which are intimately involved in the present inquiry." We give Dr M.'s appendix as foot-notes.—ED.

† Ethnography may be divided into three branches—1. Physical or Organic Ethnography; 2. Philological Ethnography; and, 3. Historical Ethnography.

mental character, and the national affinities, of the various and widely scattered tribes of the human family.

Among these, the aboriginal inhabitants of America claim our especial attention. This vast theatre has been thronged, from immemorial time, by numberless tribes, which lived only to destroy, and be in turn destroyed, without leaving a trace of their sojourn on the face of the earth. Contrasted with these were a few civilized communities, whose monuments awaken our surprise without unfolding their history; and he who would unravel their mysteries may be compared, in the language of the poets, to a man standing by the stream of time, and striving to rescue from its waters the wrecked and shattered fragments which float onward to oblivion.

It is not my present intention even to enumerate the many theories which have been advanced in reference to the origin of the American nations; although I may, in the sequel, inquire whether their genealogy can be traced to the Polyne-sians or Mongolians, Hindoos, Jews, or Egyptians. Nor shall I attempt to analyse the views of certain philosophers, who imagine that they have found not only a variety of races, but several *species* of men, among the aborigines of this continent. It is chiefly my intention to produce a few of the more strikingly characteristic traits of these people, to sustain the position that all the American nations, excepting the Esquimaux, are of one race, and that this race is peculiar and distinct from all others.

1. *Physical Characteristics.* It is an adage among travelers that he who has seen one tribe of Indians, has seen all, so much do the individuals of this race resemble each other, notwithstanding their immense geographical distribution, and those differences of climate which embrace the extremes of heat and cold. The half-clad Fuegian, shrinking from his dreary winter, has the same characteristic lineaments, though in an exaggerated degree, as the Indians of the tropical plains; and these again resemble the tribes which inhabit the region west of the Rocky Mountains, those of the great valley of the Mississippi, and those again which skirt the Esquimaux on the north. All possess alike the long, lank, black hair, the brown or cinnamon-coloured skin, the heavy brow, the dull and sleepy eye, the full and compressed lips, and the salient but dilated nose. These traits, moreover, are equally common to the savage and civilized nations; whether they inhabit the margins of rivers and feed on fish, or rove the forest, and subsist on the spoils of the chase.

It cannot be questioned that physical diversities do occur,

equally singular and inexplicable, as seen in different shades of colour, varying from a fair tint to a complexion almost black; and this, too, under circumstances in which climate can have little or no influence. So also, in reference to stature, the differences are remarkable in entire tribes, which, moreover, are geographically proximate to each other. These facts, however, are mere exceptions to a general rule, and do not alter the peculiar physiognomy of the Indian, which is as undeviatingly characteristic as that of the Negro; for whether we see him in the athletic Charib or the stunted Chayma, in the dark Californian or the fair Borroa, he is an Indian still, and cannot be mistaken for a being of any other race.

The same conformity of organization is not less obvious in the osteological structure of these people, as seen in the squared or rounded head, the flattened or vertical occiput, the high cheek-bones, the ponderous maxillæ, the large quadrangular orbits, and the low receding forehead. I have had opportunity to compare nearly four hundred crania, derived from tribes inhabiting almost every region of both Americas, and have been astonished to find how the preceding characters, in greater or less degree, pervade them all.

This remark is equally applicable to the ancient and modern nations of our continent; for the oldest skulls from the Peruvian cemeteries, the tombs of Mexico, and the mounds of our own country, are of the same type as the heads of the most savage existing tribes.* Their physical organization

* See *Crania Americana*, *passim*.—On the 6th of July 1841, I made the following communication to the Academy of Natural Sciences of Philadelphia; and now extract it from the *Proceedings* of the Society of that date:—

I submit to the inspection of the members eight adult skulls of the ancient Mexican race; for six of which I am indebted to Don J. Gomez de la Cortina, and for the other two to Dr John P. Macartney, of the city of Mexico. All these crania have been received since the publication of my *Crania Americana*.

The skulls are supposed to be of the following nations:—

1. OTOMIES?—Four in number, with the high vertex, flat occiput, great lateral diameter, and broad face, characteristic of the American race. The Otomies preceded the Toltecas, and were the least cultivated of the demi-civilized nations of Anahuac. The largest of these heads gives 92 cubic inches of internal capacity; the smallest, that of a female, only 67.
2. CHECHEMECAN?—A single skull, of 83 cubic inches of internal capacity. This nation followed the Toltecas in the possession of Mexico, in the eleventh century of our era. They were nomades and hunters, but rapidly acquired the arts and civilization of their predecessors.
3. TLASCALAN?—A single cranium. These people formed one of the seven tribes who established themselves in Mexico during the Che-

proves the origin of one to have been equally the origin of all. The various civilized nations are to this day represented

chemecan monarchy, and are renowned in history for their warlike exploits. They are well known to have rendered Cortez essential aid in taking the city of Mexico. This skull gives an internal capacity of 84 cubic inches, and, like the others of this series, is remarkable for its diameter between the parietal bones.

It is worthy of remark, that the average internal capacity of these six authentic Mexican skulls, is precisely what I have accorded to these people in my *Crania Americana*, viz. seventy-nine cubic inches. The mean of the facial angle also accords with my previous measurements, and gives 75°.

All these heads were obtained from tumuli or mounds, within the territories of the nations whose names they bear, so as to leave no doubt in the mind of the distinguished gentleman from whom I received them, of their having pertained to individuals of those nations.

The two remaining crania are supposed to be those of AZTECS, who also belonged to the confederacy of the seven tribes, but were the last to take possession. These were the people who subsequently obtained the supreme power, and, under the name of Aztecs, or Mexicans, governed the country at the epoch of the Spanish invasion, A. D. 1521. The Aztecs were a brave and intelligent people, but remarkable for bloody rites, both in their warlike and religious observances. They were less cultivated than the Toltecas, but much more so than the surrounding barbarous tribes; and appear, in fact, to have been the connecting link between the two. The largest of these heads gives 85 cubic inches of internal capacity; the smallest 77; the medium being 80 cubic inches. The configuration of these heads is on the same model as the preceding series, and the mean facial angle differs but a single degree.

Whoever will be at the pains to compare this series of skulls with those from the barbarous tribes, will, I think, agree that the facts thus derived from organic characters corroborate the position I have long maintained, that all the American nations, excepting the polar tribes, are of one race and one species, but of two great families, which resemble each other in physical, but differ in intellectual, characters.

At a subsequent meeting of the Society (August 9. 1842), I exhibited the remains of a human skeleton, found by Mr J. L. Stephens in a vault or tomb at the ruins near Ticul, nineteen leagues from Merida, in Yucatan. These bones have pertained to a female, whose stature has not exceeded five feet three inches, at the same time that the absence of *epiphyses* and consequent consolidation of the bones are proofs of adult age. From the appearance of the teeth, however, which are fresh, and not sensibly worn, and a line or furrow marking off the crista of the ilium, it is presumed that this individual had not passed her twentieth year. The bones of the head, which are still partially separable at the sutures, are admirably characteristic of the *American Race*, as seen in the vertical occiput and the great inter-parietal diameter, which measures five inches and eight-tenths. The head is of full size, in proportion to the rest of the skeleton, of which the bones are of very delicate proportions, especially those of the feet and hands. An interesting feature of this skeleton is the occurrence of a large spongy *node* on the upper and inner surface of the left tibia, on which it extends about two inches in length, an inch in breadth, and half an inch in thickness. Dr Bridges having subjected some fragments of these bones to the usual chemical tests, found

by their lineal descendants who inhabit their ancestral seats, and differ in no exterior respect from the wild and uncultivated Indians; at the same time, in evidence of their lineage, Clavigero and other historians inform us, that the Mexicans and Peruvians yet possess a latent mental superiority which has not been subdued by three centuries of despotism. And again, with respect to the royal personages and other privileged classes, there is indubitable evidence that they were of the same native stock, and presented no distinctive attributes excepting those of a social or political character.

The observations of Molina and Humboldt are sometimes quoted in disproof of this prevailing uniformity of physical characters. Molina says that the difference between an inhabitant of Chili and a Peruvian is not less than between an Italian and a German; to which Humboldt adds, that the American race contains nations whose features differ as essentially from one another as those of the Circassians, Moors, and Persians. But all these people are of one and the same *race*, and readily recognised as such, notwithstanding their differences of feature and complexion;* and the American nations present a precisely parallel case.

I was at one time inclined to the opinion that the ancient Peruvians, who inhabited the islands and confines of the Lake Titicaca, presented a congenital form of the head entirely different from that which characterizes the great American race; nor could I at first bring myself to believe that their wonderfully narrow and elongated crania, resulted solely from artificial compression applied to the rounded head of the Indian. That such, however, is the fact, has been indisputably proved by the recent investigations of M. D'Orbigny. This distinguished naturalist passed many months on the table-land of the Andes, which embraces the region of these extraordinary people, and examined the desiccated remains of hundreds of individuals in the tombs where they have lain for centuries. M. D'Orbigny remarked, that while many of the heads were deformed in the manner to which we have adverted, others differed in nothing from the usual conformation. It was also observed that the flattened skulls were uniformly those of men, while those of the women remained unaltered; and, again, that the most elongated heads were preserved in the largest and finest tombs, shewing that this

them in a very great degree deprived of animal matter—an additional evidence of their antiquity.—See Stephens' *Incidents of Travel in Yucatan*, vol. i. p. 281.

* A portion of the Moorish population of Africa is a very mixed race of Arabs, Berbers, Negroes, &c.

cranial deformity was a mark of distinction. But to do away with any remaining doubt on this subject, M. D'Orbigny ascertained that the descendants of these ancient Peruvians yet inhabit the land of their ancestors, and bear the name of *AYMARAS*, which may have been their primitive designation; and lastly, the modern Aymaras resemble the common *Quichua* or Peruvian Indians in every thing that relates to physical conformation, not even excepting the head, which, however, they have ceased to mould artificially.*

* (From Vol. viii. of the Jour. of the Acad. of Natural Sciences of Philadelphia.) In my work on American skulls (*Crania Americana*), I have expressed the opinion that the heads of the ancient Peruvians were *naturally* very much elongated; and that they differed in this respect from those of the Inca Peruvians, and other surrounding nations; and having given this opinion at a meeting of the Academy prior to the publication of my work, I take the present occasion to renounce it.

In the American Journal of Science for March 1840, I have already, in a brief note, adverted to this change of opinion; and I now repeat my matured conclusions, in connection with positive facts, derived from the work of a distinguished traveller and naturalist, M. Alcide D'Orbigny.

This gentleman not only visited the elevated table-land of the Andes, which was once inhabited by the ancient Peruvians, but he remained a long time in that interesting region, and has collected numerous facts in relation of the people themselves.

1. The descendants of the ancient Peruvians yet inhabit the land of their ancestors, and bear the name of Aymaras, which was probably their primitive designation.

2. The modern Aymaras resemble the surrounding Quichua or Peruvian nations in colour, figure, features, expression, shape of the head (which they have ceased to mould into artificial forms), and, in fact, in every thing that relates to physical conformation and social customs. Their languages differ, but even here there is a resemblance which proves a common origin.

3. On examining the tombs of the ancient Aymaras, in the environs of the lake Titicaca, M. D'Orbigny remarked that those which contained the compressed and elongated skulls, contained also a greater number that were not flattened; whence he infers that the deformity was not natural, or characteristic of the nation, but the result of mechanical compression.

4. It was also remarked that those skulls which were flattened were uniformly those of men, while the heads of the women always retained the natural shape,—the squared or spheroidal form which is characteristic of the American race, and especially of the Peruvians.

5. The most elongated heads were found in the largest and finest tombs; showing that the deformity was a mark of distinction among these people.

6. The researches of M. D'Orbigny confirm the statements made at distant intervals of time by Pedro de Cieza, Garcilaso de la Vega, and Mr Pentland, and prove conclusively, what I have never doubted, that these people were the architects of their own tombs and temples; and not, as some suppose, intruders who had usurped the civilization, and appropriated the ingenuity, of an antecedent and more intellectual race.

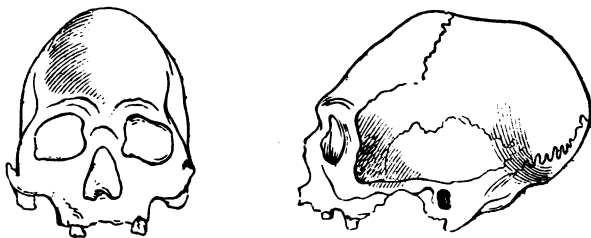
Submitted to the same anatomical test, the reputed giant and dwarf races of America prove to be the mere inventions of ignorance or imposition. A careful inspection of the remains of both, has fully satisfied me that the asserted gigan-

M. D'Orbigny found temples from 100 to 200 metres in length, facing the east, and ornamented with rows of angular columns; enormous gateways made of a single mass of rock, and covered with bas-reliefs; colossal statues of basalt; and large square tombs, wholly above ground, and in such numbers that they are compared to towns and villages.

My published observations go to shew that the internal capacity of the cranium, as indicative of the size of the brain, is nearly the same in the ancient and modern Peruvians, viz., about seventy-six cubic inches—a smallness of size which is without a parallel among existing nations, excepting only the Hindoos.

M. D'Orbigny even supposes the ancient Peruvians to have been the lineal progenitors of the Inca family; a question which is not yet decided. Supposing this to be the fact, we may inquire how it happens that the Incas should have abandoned the practice of distorting the cranium; especially as this, among the Aymaras, was an aristocratic privilege?

I was at first at a loss to imagine how this singular elongation of the head had been effected; for when pressure is applied to a spheroidal head, as in the instance of the Chenouks and other tribes of the Columbia river, the skull expands *laterally* in proportion as it is depressed above; whereas, in these people, the head is narrow from the face to the occiput. It seems probable that this conformation was produced by placing splints or compresses on each side of the head from the cheek bones to the parietal protuberances, and another on the forehead, and confining them by rotary bandages. In this way the face, in the process of growth, would be protruded in front, and the head elongated backwards; while the skull, in all other directions, could expand comparatively little. [Dr Morton illustrates these remarks by inserting outlines taken from a cast of one of the skulls obtained by Mr Pentland: we give, instead of them, two sketches of a similar skull brought from Arica, and described in vol. xv., p. 224, of this Journal.—ED. P. J.]



Dr Goddard has suggested to me that the deformity observable in this series of crania might have been produced by the action of rotary bandages alone, without the use of splints or compresses. I admit the possibility of this result in some of the heads, but think that in others there is satisfactory evidence of the employment of the splint or compress, especially on the *os frontis*.

I have in my possession six casts of heads and three skulls of these people, all of which present the peculiarly elongated form in question.

tic form of some nations has been a hasty inference on the part of unpractised observers ; while the so-called pigmies of the valley of the Mississippi were mere children, who, for reasons not wholly understood, were buried apart from the adult people of their tribe.*

Thus it is that the American Indian, from the southern extremity of the continent to the northern limit of his range, is the same exterior man. With somewhat variable stature and complexion, his distinctive features, though variously modified, are never effaced ; and he stands isolated from the rest of mankind, identified at a glance in every locality, and under every variety of circumstance ; and even his desiccated remains which have withstood the destroying hand of time, preserve the primeval type of his race, excepting only when art has interposed to pervert it.

2. *Moral Traits.* These are, perhaps, as strongly marked as the physical characteristics of which we have just spoken ; but they have been so often the subject of analysis as to claim only a passing notice on the present occasion. Among the most prominent of this series of mental operations is a sleepless caution, an untiring vigilance, which presides over every action and masks every motive. The Indian says nothing and does nothing without its influence : it enables him to deceive others without being himself suspected ; it causes that proverbial taciturnity among strangers which changes to garrulity among the people of his own tribe ; and it is the basis of that invincible firmness which teaches him to contend unrepiningly with every adverse circumstance, and even with death in its most hideous forms.

The love of war is so general, so characteristic, that it scarcely calls for a comment or an illustration. One nation is in almost perpetual hostility with another, tribe against tribe, man against man ; and with this ruling passion are linked a merciless revenge, and an unsparing destructiveness. The Chickasaws have been known to make a stealthy march of six hundred miles from their own hunting-grounds, for the sole purpose of destroying an encampment of their enemies. The small island of Nantucket, which contains but a few square miles of barren sand, was inhabited at the advent of the European colonies by two Indian tribes, who sometimes engaged in hot and deadly feud with each other. But what is yet more remarkable, the miserable natives of Terra del Fuego, whose common privations have linked them for a time

* Dr Morton mentions in a note (which we need not copy), some facts which prove that the so-called pigmies were children.—Ed.

in peace and fellowship, become suddenly excited by the same inherent ferocity, and exert their puny efforts for mutual destruction. Of the destructive propensity of the Indian, which has long become a proverb, it is almost unnecessary to speak ; but we may advert to a forcible example from the narrative of the traveller Hearne, who accompanied a trading party of northern Indians on a long journey ; during which he declares that they killed every living creature that came within their reach ; nor could they even pass a bird's nest without slaying the young or destroying the eggs.

That philosophic traveller, Dr Von Martius, gives a graphic view of the present state of natural and civil rights among the American aborigines. Their sub-division, he remarks, into an almost countless multitude of greater and smaller groups, and their entire exclusion and excommunication with regard to each other, strike the eye of the observer like the fragments of a vast ruin, to which the history of the other nations of the earth furnishes no analogy. "This disruption of all the bands by which society was anciently held together, accompanied by a Babylonish confusion of tongues, the rude right of force, the never ending tacit warfare of all against all, springing from that very disrapture,—appear to me the most essential, and, as far as history is concerned, the most significant points in the civil condition of the aboriginal population of America."

It may be said that these features of the Indian character are common to all mankind in the savage state. This is generally true ; but in the American race they exist in a degree which will fairly challenge a comparison with similar traits in any existing people ; and if we consider also their habitual indolence and improvidence, their indifference to private property, and the vague simplicity of their religious observances,—which, for the most part, are devoid of the specious aid of idolatry,—we must admit them to possess a peculiar and eccentric moral constitution.

If we turn now to the demi-civilized nations, we find the dawn of refinement coupled with those barbarous usages which characterize the Indian in his savage state. We see the Mexicans, like the later Romans, encouraging the most bloody and cruel rites, and these too in the name of religion, in order to inculcate hatred of their enemies, familiarity with danger, and contempt of death ; and the moral effect of this system is manifest in their valorous, though unsuccessful, resistance to their Spanish conquerors.

Among the Peruvians, however, the case was different. The inhabitants had been subjugated to the Incas by a com-

bined moral and physical influence. The Inca family were looked upon as beings of divine origin. They assumed to be the messengers of heaven, bearing rewards for the good and punishment for the disobedient, conjoined with the arts of peace and various social institutions. History bears ample testimony that these specious pretences were employed first to captivate the fancy and then to enslave the man. The familiar adage that "knowledge is power," was as well understood by them as by us; learning was artfully restricted to a privileged class; and the genius of the few soon controlled the energies of the many. Thus the policy of the Incas inculcated in their subjects an abject obedience which knew no limit. They endeavoured to eradicate the feeling of individuality; or, in other words, to unite the minds of the plebeian multitude in a common will, which was that of their master. Thus when Pizarro made his first attack on the defenceless Peruvians in the presence of their Inca, the latter was borne in a throne on the shoulders of four men; and we are told by Herrera that while the Spaniards spared the sovereign, they aimed their deadly blows at his bearers, who, however, never shrunk from their sacred trust; for when one of their number fell, another immediately took his place; and the historian declares that if the whole day had been spent in killing them, others would still have come forward to the passive support of their master. In fact, what has been called the paternal government of the Incas was strictly such; for their subjects were children, who neither thought nor acted except at the dictation of another. Thus it was that a people whose moral impulses are known to have differed in little or nothing from those of the barbarous tribes, were reduced, partly by persuasion, partly by force, to a state of effeminate vassalage not unlike that of the modern Hindoos. Like the latter, too, they made good soldiers in their native wars, not from any principle of valour but from the sentiment of passive obedience to their superiors; and hence, when they saw their monarch bound and imprisoned by the Spaniards, their conventional courage at once forsook them; and we behold the singular spectacle of an entire nation prostrated at a blow, like a strong man whose energies yield to a seemingly trivial but rankling wound.

After the Inca power was destroyed, however, the dormant spirit of the people was again aroused in all the moral vehemence of their race, and the gentle and unoffending Peruvian became transformed into the wily and merciless savage. Every one is familiar with the sequel. Resistance was too late to be availing, and the fetters to which they had confidently submitted were soon rivetted for ever.

As we have already observed, the Incas depressed the moral energies of their subjects in order to secure their own power. This they effected by inculcating the arts of peace, prohibiting human sacrifices, and in a great measure avoiding capital punishments; and blood was seldom spilt excepting on the subjugation of warlike and refractory tribes. In these instances, however, the native ferocity of their race broke forth even in the bosom of the Incas; for we are told by Garcilaso, the descendant and apologist of the Peruvian kings, that some of their wars were absolutely exterminating; and among other examples he mentions that of the Inca Yupanqui against the province of Collao, in which whole districts were so completely depopulated, that they had subsequently to be colonized from other parts of the empire: and in another instance the same unsparing despot destroyed twenty thousand Caranques, whose bodies he ordered to be thrown into an adjacent lake, which yet bears the name of the Sea of Blood. In like manner, when Atahualpa contested the dominion with Guascar, he caused the latter, together with thirty of his brothers, to be put to death in cold blood, that nothing might impede his progress to the throne.*

We have thus endeavoured to shew, that the same moral traits characterize all the aboriginal nations of this continent, from the humanized Peruvian to the rudest savage of the Brazilian forest.

3. Intellectual Faculties.—It has often been remarked, that the intellectual faculties are distributed with surprising equality among individuals of the same race who have been similarly educated, and subjected to the same moral and other influences: yet even among these, as in the physical man, we see the strong and the weak, with numberless intermediate gradations. This equality is infinitely more obvious in savage than in civilized communities, simply, because in the former the condition of life is more equal; whence it happens that in contrast to a single master mind, the plebeian multitude are content to live and die in their primitive ignorance and inferiority.

This truth is obvious at every step of the present investigation; for of the numberless hordes which have inhabited the American continent, a fractional portion only has left any trace of refinement. I venture here to repeat my matured conviction, that, as a race, they are decidedly inferior to the

* The broad skulls of the Americans, indicating large organs of Cautiousness, Secretiveness, and Destructiveness, are strikingly accordant with the wary, taciturn, and ferocious dispositions here described by Dr Morton.—ED.

Mongolian stock. They are not only averse to the restraints of education, but seem for the most part incapable of a continued process of reasoning on abstract subjects. Their minds seize with avidity on simple truths, while they reject whatever requires investigation or analysis. Their proximity for more than two centuries to European communities, has scarcely effected an appreciable change in their manner of life ; and as to their social condition, they are probably in most respects the same as at the primitive epoch of their existence. They have made no improvement in the construction of their dwellings, except when directed by Europeans who have become domiciliated among them ; for the Indian cabin or the Indian tent, from Terra del Fuego to the river St Lawrence, is, perhaps, the humblest contrivance ever devised by man to screen himself from the elements. Nor is their mechanical ingenuity more conspicuous in the construction of their boats ; for these, as we shall endeavour to shew in the sequel, have rarely been improved beyond the first rude conception. Their imitative faculty is of a very humble grade, nor have they any predilection for the arts or sciences. The long annals of missionary labour and private benefaction, present few exceptions to this cheerless picture, which is sustained by the testimony of nearly all practical observers. Even in those instances in which the Indians have received the benefits of education, and remained for years in civilized society, they lose little or none of the innate love of their national usages, which they almost invariably resume when left to choose for themselves.*

Such is the intellectual poverty of the barbarous tribes ; but contrasted with these, like an oasis in the desert, are the demi-civilized nations of the new world ; a people whose attainments in the arts and sciences are a riddle in the history of the human mind. The Peruvians in the south, the Mexicans in the north, and the Muyscas of Bogota between the two, formed these contemporary centres of civilization, each independent of the other, and each equally skirted by wild and savage hordes. The mind dwells with surprise and admiration on their Cyclopean structures, which often rival those of Egypt in magnitude ;—on their temples, which embrace almost every principle in architecture, except the arch alone ;—and on their statues and bas-reliefs, which, notwithstanding some conventional imperfections, are far above the rudimentary state of the arts.†

* *Crania Americana*, p. 81.

† I cannot omit the present occasion to express my admiration of the recent discoveries of Mr Stephens among the ruined cities of Central

I have elsewhere ventured to designate these demi-civilized nations by the collective name of the **TOLTECAN FAMILY** ; for although the Mexican annals date their civilization from a period long antecedent to the appearance of the Toltecas, yet the latter seem to have cultivated the arts and sciences to a degree unknown to their predecessors. Besides, the various nations which at different times invaded and possessed themselves of Mexico, were characterized by the same fundamental language and the same physical traits, together with a strong analogy in their social institutions ; and as the appearance of the Incas in Peru was nearly simultaneous with the dispersion of the Toltecas in the year 1050 of our era, there is reasonable ground for the conjecture that the Mexicans and Peruvians were branches of the same Toltecan stock. We have alluded to a civilization antecedent to the appearance of the Incas, and which had already passed away when they assumed the government of the country. There are traditional and monumental evidences of this fact, which can leave no doubt on the mind, although of its date we can form no just conception. It may have even preceded the Christian era, nor do we know of any positive reasons to the contrary. Chronology may be called the crutch of history ; but with all its imperfections it would be invaluable here, where no clue remains to unravel those mysterious records which excite our research, but constantly elude our scrutiny. We may be permitted, however, to repeat what is all-important to the present inquiry, that these ancient Peruvians were the progenitors of the existing Aymara tribes of Peru, while these last are identified in every particular with the people of the great Inca race. All the monuments which these various nations have left behind them, over a space of three thousand miles, go also to prove a common origin, because, notwithstanding some minor differences, certain leading features pervade and characterize them all.

Whether the hive of the civilized nations was, as some suppose, in the fabled region of Aztlan in the north, or whether, as the learned Cabrera has endeavoured to shew, their native seats were in Chiapas and Guatemala, we may not stop to

America and Yucatan. The spirit, ability, and success which characterize these investigations, are an honour to that gentleman and to his country ; and they will probably tend, more than the labours of any other person, to unravel the mysteries of American Archæology. Similar in design to these are the researches of my distinguished friend the Chevalier Freidrichthal, the results of whose labours, though not yet given to the world, are replete with facts of the utmost importance to the present inquiry.

inquire ; but to them, and to them alone, we trace the monolithic gateways of Peru, the sculptures of Bogota, the ruined temples and pyramids of Mexico, and the mounds and fortifications of the valley of the Mississippi.

Such was the Toltecan Family ; and it will now be inquired how it happens that so great a disparity should have existed in the intellectual character of the American nations, if they are all derived from a common stock, or, in other words, belong to the same race ? How are we to reconcile the civilization of the one with the barbarism of the other ? It is this question which has so much puzzled the philosophers of the past three centuries, and led them, in the face of facts, to insist on a plurality of races. We grant the seeming anomaly ; but however much it is opposed to general rule, it is not without ample analogies among the people of the old world. No stronger example need be adduced than that which presents itself in the great Arabian family ; for the Saracens who established their kingdom in Spain, whose history is replete with romance and refinement, whose colleges were the centres of genius and learning for several centuries, and whose arts and sciences have been blended with those of every subsequent age ;—these very Saracens belong not only to the same race, but to the same family, with the Bedouins of the desert ; those intractable barbarians who scorn all restraints which are not imposed by their own chief, and whose immemorial laws forbid them to sow corn, to plant fruit trees, or to build houses, in order that nothing may conflict with those roving and predatory habits which have continued unaltered through a period of three thousand years.

Other examples perhaps not less forcible, might be adduced in the families of the Mongolian race ; but without extending the comparison, or attempting to investigate this singular intellectual disparity, we shall, for the present at least, content ourselves with the facts as we find them. It is important, however, to remark, that these civilized states do not stand isolated from their barbarous neighbours ; on the contrary, they merge gradually into each other, so that some nations are with difficulty classed with either division, and rather form an intermediate link between the two. Such are the Araucanians, whose language and customs, and even whose arts, prove their direct affiliation with the Peruvians, although they far surpass the latter in sagacity and courage, at the same time that their social institutions present many features of intractable barbarism. So also the Aztec rulers of Mexico, at the period of the Spanish invasion, exhibit, with their bloody sacrifices and multiform idolatry, a strong con-

trast to the gentler spirit of the Toltecas who preceded them, and whose arts and ingenuity they had usurped. Still later in this intermediate series were the Natchez tribes of the Mississippi, who retained some traces of the refinement of their Mexican progenitors, mingled with many of the rudest traits of savage life. It is thus that we can yet trace all the gradations, link by link, which connect these extremes together; shewing that, although the civilization of these nations is fast becoming obsolete, although their arts and sciences have passed away with a former generation, still the people remain in all other respects unchanged, although a variety of causes has long been urging them onward to deep degradation and rapid extinction. Strange as these intellectual revolutions may seem, we venture to assert, that, all circumstances being considered, they are not greater than those which have taken place between the ancient and modern Greeks. If we had not incontestible evidence to prove the fact, who would believe that the ancestors of the Greeks of the present day were the very people who gave glory to the age of Pericles!

It may still be insisted that the religion and the arts of the American nations point to Asia and Egypt; but it is obvious, as Humboldt and others have remarked, that these resemblances may have arisen from similar wants and impulses, acting on nations in many respects similarly circumstanced. "It would indeed be not only singular but wonderful and unaccountable," observes Dr Caldwell, "if tribes and nations of men, possessed of similar attributes of mind and body, residing in similar climates and situations, influenced by similar states of society, and obliged to support themselves by similar means, in similar pursuits,—it would form a problem altogether inexplicable, if nations thus situated did not contract habits and usages, and, instinctively, modes of life and action, possessing towards each other many striking resemblances." Here, also, we may draw an illustration from the old world; for, notwithstanding the comparative proximity of the Hindoos and Egyptians, and the evident analogies in their architecture, mythology, and social institutions, there is now no reason to believe them cognate nations; and the resemblances to which we have adverted have probably arisen from mutual intercourse, independent of lineal affiliation. And so with the nations of America. The casual appearance of shipwrecked strangers would satisfactorily explain any sameness in the arts and usages of the one and the other, as well as those words which are often quoted in evidence of a common origin of language, but which are so few in number as to be readily accounted for on the foregoing principle.

The entire number of common words is said to be one hundred and four between the American languages and those of Asia and Australia ; forty-three with those of Europe ; and forty with those of Africa ; making a total of one hundred and eighty-seven words. But taking into account the mere coincidence by which some of these analogies may be reasonably explained, I would enquire, in the language of an ingenious author, whether these facts are sufficient to prove a connexion between four hundred dialects of America and the various languages of the old world ?

Even so late as the year 1833, a Japanese junk was wrecked on the north-west coast of America, and several of the crew escaped unhurt to the shore ; and I have myself seen some porcelain vessels which were saved on that occasion. Such casualties may have occurred in the early periods of American history ; and it requires no effort of the imagination to conceive the influence these persons might have exerted, in various respects, had they been introduced to the ancient courts of Peru and Mexico. They might have contributed something to extend, or at least to modify, the arts and sciences of the people among whom they were thrown, and have added a few words to the national language.

I am informed by my friend Mr Townsend, who passed several months among the tribes of the Columbia river, that the Indians there have already adopted from the Canadian traders several French words, which they use with as much freedom as if they belonged to their own vocabulary.

It follows, of course, from the preceding remarks, that we consider the American race to present the two extremes of intellectual character ; the one capable of a certain degree of civilization and refinement, independent of extraneous aids ; the other exhibiting an abasement which puts all mental culture at defiance : the one composed, as it were, of a handful of people, whose superiority and consequent acquisitions have made them the prey of covetous destroyers ; the other a vast multitude of savage tribes, whose very barbarism is working their destruction from within and without. The links that connect them partake of the fate of the extremes themselves ; and extinction appears to be the unhappy, but fast approaching, doom of them all.

(To be concluded in next Number.)

IV. *Intellectual Freedom—its Advocates and Opponents.*

In No. VIII. of the *Zoist*, there is an article under the above title, setting forth, in a somewhat declamatory style, the right and duty of freely forming and publishing opinions, and the monstrous character of persecution on account of difference of belief. Our views on that subject have been repeatedly indicated (see *ante*, ix. 414, 418 ; x. 514 ; xiv. 168), and we were not a little surprised to find the following paragraph in the article referred to :—

“ Recent events prove, that although a few individuals may be perfectly convinced of the injustice and irrational tendency of religious prosecutions, there are a vast number who still think that the treatment of the felon is the best prescription for a doubting brother, and who practically declare that the hypocrite and cringing slave is to be preferred to the sincere, upright, and honest thinker. What infatuation ! They absolutely believe that they are promoting the advancement of truth, by preventing the free utterance of thought, and the certain result, interchange of knowledge. We refer more particularly to the cases which have lately occurred in the northern metropolis. Four numbers of the *Edinburgh Phrenological Journal* have appeared since two individuals were sentenced to imprisonment and the usual criminal routine, for promulgating opinions which did not square with the orthodox opinions of the day. This is a question which deeply concerns cerebral physiologists. If their science is capable of placing any question on a clear and satisfactory basis, it is this ; and yet the journal published in the city where these iniquitous transactions occurred—the journal, whose editor must daily pass the court where these trials took place, and who is a member of the profession more particularly engaged in perpetrating these gross acts of injustice—contains not one word which could authorize the belief that the proceedings were disapproved of—chronicles not one fact or argument which could lead one to suppose that the principles it has been engaged in enforcing for the last twenty years, have in the slightest degree been infringed. Why is this ? Is our science to continue a mere record of interesting physiological facts, and not to be made to impress on our laws a more just and humanizing spirit ? Are the disciples of Gall still to continue to collect the proofs of natural signs and symbols, and not to insist with energy on the adoption of measures in accordance with man’s nature ? Is science to succumb at the

bid of authority, and a blind conformity to take the place of rational conviction? Is this the morality which is to be shamelessly paraded by our judges, and the 'magazine of moral science,' published in modern Athens, not to record a single protest? Shame on the men who claim humanity for their theme, and who, when that humanity is crushed, quietly allow the injustice to be perpetrated without advancing to the rescue. Shame on the men who claim the title of philosophers, and are yet wanting in the courage to meet the frown of power, or the prejudices of the million. Shame, everlasting shame, on the men who know better, yet tremble to avow it—who privately raise their fronts and declaim on the humanizing and civilizing tendency of their principles, but who publicly permit these principles to be invaded, without uttering a sound which can support the dignity of reason or the right of freedom." The trials alluded to are those of Thomas Paterson and Henry Robinson, before the High Court of Justiciary, in 1843.

To all this indignant vituperation we have a very short answer to make. In the first place, we have never regarded these cases as instances of persecution for the fair exercise of the right of free discussion, and, therefore, had no inclination to make them the occasion of a harangue against either judges or jury. We regard it as a maxim amply supported by Phrenology, that in attacking established error, whether political, philosophical, or religious, the best method is to appeal directly to the moral sentiments and intellect of those whom we wish to reclaim,—to avoid all unnecessary offence to their Self-Esteem,—and, above all, to avoid converting the efforts which we make for their enlightenment, into occasions for the gratification of our own Self-Esteem, Combativeness, and Destructiveness. More especially should these principles of action be scrupulously observed in endeavouring to convince men of the errors of their religious opinions, which in most instances are founded on the authority of ages, infused into them almost with their mothers' milk, and linked with every feeling that is pure, elevated, and venerable, in human nature. Now Paterson and Robinson were tried for conduct diametrically opposed to all these principles, namely, for manifestations, under the pretence of religious discussion, of their own Self-Esteem, Combativeness, and Destructiveness, which naturally tended to rouse the same faculties into activity in those whom they assailed, and thus to lead to breaches of the peace, instead of moral conviction and sound theological conclusions.

In the second place, we remark, that in our opinion the

Zoist uses an unwarrantable licence of language in affirming that Paterson and Robinson were “*sentenced to imprisonment, and the usual criminal routine, for promulgating opinions which did not square with the orthodox opinions of the day.*”

Who knows better than the *Zoist* does from experience, that no man is now punished, in this country, for promulgating the most heterodox opinions, even when expressed with a heat and intemperance which savour more of passion than of the sobriety of philosophic discussion? Who has ever prosecuted the *Zoist* for his heterodox opinions? Who interferes with the dissemination of Hume’s, Gibbon’s, Voltaire’s, Paine’s, or Volney’s antichristian publications? Or who has hitherto attempted to treat Mr Hennell as a felon, because of his *Inquiry into the Origin of the Christian Religion*? Is it not clear, then, that Paterson might have expressed *his* hostility to orthodox opinions with the utmost latitude, consistent with decency of language? As our readers well know, we are no advocates for the employment of persecution, in any shape, as a defence of truth. Our feelings and our reason alike revolt against it, and we have never shrunk from expressing our conviction of its impolicy as well as injustice. Our faith in the vital power of truth is too implicit to make us desire any such unhallowed aid in its defence or diffusion. But are we, on that account, as the *Zoist* seems to think, *bound* to step forward for the protection and defence of every reckless and unreasonable man who, even when he advocates the cause of truth, chooses to envelop it in a garb so offensive and indecent as to shock the feelings of all well-constituted minds?

So far from Paterson having been prosecuted simply for the “sincere, upright, and honest” promulgation of heterodox opinions, it is impossible to read his trial and speeches without perceiving that he was punished chiefly for committing an outrage on the feelings of the community, not only by what he said, but, more especially, by the offensive placards displayed at his door; and that it was only after warning and remonstrance were tried in vain to remove the nuisance, that the law interfered. *His avowed aim was to court prosecution*, for the purpose of bringing into notice himself and the objectionable publications in which he dealt. If he succeeded in his aim, by forcing on the execution of penal laws, which, regarded simply as the means of suppressing heterodoxy, are now mere dead letter, does it follow that we, as phrenologists, were bound, in sense or honesty, to “advance to his rescue” from the consequences of conduct with which we had not one atom of sympathy, but which, on the contrary, we could not but condemn as both morally and philosophically wrong? As

remarked by the Lord Justice-Clerk at the trial, "The character of the books was not that of a fair and serious discussion of the truth and authority of the Holy Scriptures, by a man who seriously addressed his mind to the point, with a view to promote that which he believed to be the truth; but they were written in a style, tone, and character, which demonstrated that they were intended to vilify and bring into contempt the Christian religion;" in other words, to rouse the Self-Esteem, Combativeness, and Destructiveness, much more than the intellectual faculties, of those to whom they were addressed.

The *Zoist* displays an equal lack of reason and of justice, when he indignantly vituperates the judges for their "shameless parade of morality" in carrying the law into effect. Does not the *Zoist* know that judges are *the mere administrators of the law as it exists*; that, when called upon, they *must* execute it; and that they cannot of themselves abrogate or alter a bad law, even when it becomes a means of doing private wrong? If he does, why does he hold them up to public scorn for administering truly the law which the Legislature has laid down for their guidance? It is universally acknowledged, that there is no greater source of danger to liberty of every description, than power in judges to *make* the law.

Again; the *Zoist* becomes purely ridiculous when he insinuates (p. 440) that the laws of our country "*command a man to believe,*" and "*punish him for disbelieving,*" what they "declare to be right and true;" and that they do not "decree him freedom, and leave him to decide by reason whether the enactments he is called upon to obey are in accordance with its dictates;" or permit him, "if he thinks a change is required, to discuss the errors he has discovered, and to promulgate the remedies he would apply." The fact is, that if he do so without wantonly or maliciously wounding the feelings of others (who, it ought always to be remembered, are on their part equally entitled to protection*), he is allowed, not only to *think* and *believe* freely (which no law attempts to hinder, or *could* hinder), but even, in spite of the letter of the law, to *publish* his conclusions as extensively as he pleases. It is only in so far as he becomes a public nuisance by rendering the discussion of the opinions of his fellow-citizens a pretence for offering them gross insults, tending to a breach of the peace, that the law ought to interfere, or actually does interfere. "Being angry," says Dr Johnson, "with one who controverts an opinion which you value, is a necessary consequence of the uneasiness which you feel.

* See Mr Hurlbut's Lecture on the Legal Protection of the Sentiments and Affections, *ante*, xv. 1.

Every man who attacks my belief, diminishes in some degree my confidence in it, and therefore makes me uneasy ; and I am angry with him who makes me uneasy. . . . Every man will dispute with great good humour upon a subject in which he is not interested. I will dispute very calmly upon the probability of another man's son being hanged ; but if a man zealously enforces the probability that my own son will be hanged, I shall certainly not be in a very good humour with him."* Much more is it to be expected, that, when the vocabulary is ransacked for epithets with which to vilify objects held in deep veneration by multitudes, a violent retaliation will ensue.

In conclusion, we observe, that whatever Phrenology can effect in rendering men tolerant, is most surely realized by imbuing their minds with its principles ; but, looking at the intolerance so frequently displayed by the conductors of the *Zoist*, its humanizing influence must be confessed to fall short of perfection. From persons who, like these gentlemen, consider every man's actions as necessary results of preceding causes, violent denunciation of the performers of actions so regarded comes with a peculiarly bad grace. Why should they vituperate when provocation is followed by its natural sequence—the resentment of the offended ?

V. *The Importance of a Correct Physiology of the Brain, as applied to the Elucidation of Medico-Legal Questions ; and the Necessity of greater Accuracy and Minuteness in reporting post-mortem Examinations.* By N. S. DAVIS, M.D., Bing-hamton, N. Y. (From the American Journal of Insanity, No. III., Jan. 1845.)

That some of the principles of Phrenology, if true, are not only of great practical importance in enabling us to determine from certain symptoms, more definitely, the nature and extent of many affections of the brain, but by affording a more definite idea of the natural functions of each individual part of the cerebral structure, greatly assist also in drawing rational conclusions from morbid appearances after death, cannot be doubted. Perhaps there is no one thing which tends more strongly to degrade the medical profession, in the estimation of enlightened men, than the various, uncertain, and often grossly contradictory testimony given by different medical men on the same case in our courts of justice. A great variety of cases are continually occurring, in which the testimony of physicians is required ; and what other inference can be drawn from their conflicting statements and conclusions, made up ostensibly from the same facts, than that the

* Boswell's Life of Johnson, anno 1776.

whole is a mere system of "guessing"—"a pretended science without a single permanent and well-established principle for its foundation." For instance, in testing the validity of a will, the attending physician is called, testifies that the testator, while making the will, was labouring under inflammation of the brain sufficient to confine him to bed, and to render active and direct depletion necessary—and further, that individuals, under such circumstances, *would be likely* to retain *full possession* of their *mental* faculties.

Another of equal celebrity is called, and testifies, with much apparent certainty, that a patient under such circumstances would *not* be likely to have possession of his mental faculties. A third, equally entitled to confidence, comes forward and maintains that the brain is composed of a number of distinct organs, performing different functions; and that all would, therefore, depend on the particular organ or organs affected. If we suppose, as we are bound to do, that each of the witnesses is equally entitled to credit, is it not evident that no conclusion whatever can be legitimately drawn from their testimony. And yet, more contradictions than in the case supposed, are almost daily occurring before our various legal tribunals. To what, then, are they owing? To carelessness of observation, and want of candid investigation? or is it some radical defect or uncertainty in the science itself?

Doubtless, by far the most prevalent cause is the great carelessness and want of proper and minute investigation on the part of the great body of physicians. Being often taught, as a part of their primary education, the mental or metaphysical philosophy of the schools, and thus habituated to contemplate the mind unconnected with its physical organ, the brain, they too often enter upon, and even become eminent in the practice of their profession, without ever investigating closely the connection between the mind and brain, and much less arriving at any clear and rational conclusions concerning it. But if it is true that the cortical or gray substance of the brain is the seat of the mental operations, and the white or fibrous portion, like the nerves, only transmitting in its functions; then we should infer, *a priori*, that disease in these respective portions of the brain would be accompanied by derangement of the corresponding functions. And further, if this cortical portion is again made up of as many distinct organs as there are separate mental faculties, then we should equally expect to find disease in any one of these organs always accompanied by derangement of the corresponding faculty. And hence, we not only arrive at definite conclusions concerning the functions of different portions of the brain, but we are prepared, on the appearance of certain symptoms,

or the derangement of certain mental faculties, to predict the location and extent of the disease ; or, on the appearance of certain morbid changes after death, to determine, with some degree of accuracy, the symptoms and mental disorders which must have preceded. The direct practical bearing and the importance of these views cannot be doubted. The only question then, is, whether the fundamental propositions on which they are based are in fact true ? If we appeal to morbid anatomy, the two following questions meet us for a candid examination :—

1st, Is there a case on record, in which morbid appearances were observed in corresponding portions of the cortical substance of the brain in both hemispheres, when the patient had not previously manifested corresponding mental derangement ?

2d, Is there a case on record, in which the morbid appearances were confined exclusively to the medullary substance, in which mental derangement had been present to any considerable extent ?

Having carefully examined every thing within our reach, touching the subject, we must thus far answer the first question in the negative. It must be remembered that the question is not whether lesions of greater or less extent have been found in *one* hemisphere, without mental disturbance ; neither is it whether organic lesions are perceptible in the brain, in every case where death takes place during the existence of insanity. As well might we suppose that plucking out the right eye would invariably destroy vision in the left also ; or that organic lesions in the lungs would be found in every case of death during difficult or disturbed respiration.

Destroying one eye might indeed lessen the field of vision, and so might destruction or disease of a portion or the whole of one hemisphere of the brain greatly lessen the strength and vigour of the mind. But have corresponding portions of the cortical substance of both hemispheres been found diseased, without derangement or destruction of some faculty of the mind ? As we have already stated, we have yet been unable to find any such instance.

But it must be confessed, that the subject is attended with some difficulty, on account of the ambiguity and indefiniteness which characterize many reports of cerebral disease. Witness the following, for example, taken from the *Lancet* for Aug. 8. 1840 :—" A female, aged sixty, had been declining in health for three or four years, and suffered occasional attacks of rheumatism. Of late, her symptoms resembled those of sub-acute inflammation of the mucous membrane of the stomach.

She vomited the blandest articles; and accompanying this was a constant and severe headache over the right eyebrow. The headache, however, was always relieved for a time by the vomiting. But she continued to fail; and one day, on being carried up stairs, her head struck with violence against the staircase. It produced no change in the symptoms—there was nothing to indicate an injury or disease of the brain, but she finally sunk, fourteen days after the blow. On dissection, the stomach was found contracted, its mucous membrane vascular, and there was a tumour adhering to the pylorus and duodenum. The membranes of the brain appeared healthy, and the left hemisphere was of its natural appearance, but on opening into the right, several ounces of coagulated blood were discovered. The walls of the cavity containing it were of the consistency of cream. The blood had merely separated into serum and crassamentum.” This case is reported as having an important bearing on medico-legal investigations; but what inference can be drawn from it, beyond the simple fact that a quantity of blood was found in the right hemisphere of the brain, around which the cerebral substance was altered in structure? But the questions, whether the disease implicated those parts connected with voluntary motion, as the optic thalami, the corpora striata, &c., or those parts connected directly with the mental faculties, as the cortical or cineritious substance forming the convolutions; or whether it was confined solely to that portion of the medullary substance, which only serves as a medium of communication between a portion of the cortical substance on the surface and the cerebro-spinal centre in the medulla oblongata, we are left entirely in the dark.

And hence we have no data from which to draw a single inference of value. Whether the effusion of blood was produced by the blow against the staircase, without previous disease of the cerebral structure, or came on gradually only a short time before death, in a portion of the brain already in a state of ramollissement from previous disease, is perhaps also difficult to determine; though the circumscribed pain in the head, the softening of the brain around the blood, together with the simple separation of that fluid into serum and crassamentum, would incline us to believe the latter was the case. The same want of precision exists in the detail of many cases related by Abercrombie, in his work on diseases of the brain.* And, indeed, if we examine carefully, we shall find almost half of the cases reported in the various medical journals of the day, equally indefinite, and consequently

* See pages 105, 108, 112, &c., of Abercrombie.

equally valueless to the physiological inquirer. They may prove what every pathologist already knows, viz., that certain parts of the brain may be diseased or totally destroyed, without producing mental derangement or disturbance. Or they may even prove, what Professor Sewall and other opponents of phrenological principles have asserted with so much apparent triumph, viz., that *every* part of the brain has been destroyed by disease and injury, without producing mental alienation ;—a fact of just as much physiological importance, as would be the assertion that ten men could be found, in whom, taken collectively, all the organs of external sense were destroyed, and yet every individual of the ten could feel, see, hear, taste, and smell.

It is true that facts form the foundation of all true science ; but that foundation will only be useful and permanent, when the facts on which it rests are carefully observed, minutely recorded, and rightly arranged. Hence, in studying the pathology of the brain, it is not enough that we ascertain that half a pound of water has been effused ; or that “there is an abscess in the right hemisphere,” or a “coagulum of blood in the left ;” but we must first, if possible, rightly understand the symptoms during life, ascertaining not only that the intellect is sane, but that all the moral faculties and propensities are equally normal. And after death we must bestow the necessary labour, to ascertain, with minuteness, the precise seat and extent of the disease. If this was done by every observer, we are sure that pathology would not long remain either barren or unfruitful in its contributions to a correct physiology of the whole nervous tissue.

And if these remarks shall serve in any degree to induce more care, and greater precision, on the part of those who report cases of disease, the object for which they are written will be fully realized. Of the great importance, if not absolute necessity, of greater accuracy and minuteness in the detail of cases, every one will be convinced who commences an examination of those already recorded, with the intention of drawing therefrom any general conclusions. In the present state of our knowledge we believe there is no case on record, contradicting the general rule, that disease in the cortical substance of the cerebral convolutions, in corresponding parts of both hemispheres, is invariably attended with derangement of some faculty or propensity of the mind. The cases which seem to militate most strongly against this rule, are those of superficial ulceration of the brain, related by Abercrombie and others. But in those cases, the ulcers were confined to one hemisphere, or affected different parts of both, and were evidently of a strictly chronic and local character.

And the more recent investigations of pathologists would induce us to believe that, in every case where death results from insanity, there is well-marked disease of the cortical substance of the brain. Thus Mr Davidson, house-surgeon to the Lancaster County Lunatic Asylum, "has examined with much care the bodies of more than 200 patients who have died in the hospital since his appointment; and the result is, that he has scarcely met with a single instance in which traces of disease in the brain, or its membranes, were not evident."* Again, M. Foville, Calmiel, Falret, and Bayle, agree in asserting, that "in mental alienation, the brain invariably presents lesions which can be distinctly recognized."† And Sir Wm. C. Ellis, Resident Medical Superintendent of the Pauper Lunatic Asylum at Hanwell [Eng.], states, "that of 154 male patients, examined after death, 145 had disease very strongly marked, either in the brain or its membranes. Of the 9 remaining, 2 were idiots from birth; 1 died of dysentery; another of epilepsy; the other 5 had not been insane more than a few months, and died of other diseases. Of the females, 67 were examined, and 62 found with disease in the brain or its membranes. Two of the other five were idiots from birth; and, with one exception, the others were recent cases."‡ The present list of cases on record would lead us to the equally important conclusion, that disease affecting the central parts of the brain, as the corpora striata, the optic thalami, and the upper portion of the medulla oblongata, invariably deranges the powers of voluntary motion and sensation. For many cases illustrating this conclusion, see *American Journal of Medical Sciences*, No. 32, August 1835; and *Abercrombie on the Brain*.

In these cases, the disease is generally insidious in its approach, and often fatal, without any other marked symptom of cerebral disease than paralysis of some one of the extremities, and sometimes convulsions. A third conclusion, of no less practical importance than the preceding, is, that disease in a part of the medullary substance, which forms the commissures or connecting fibres between the convolutions and the central parts mentioned above, when confined to one hemisphere, is seldom, if ever, characterized by either mental derangement, or disturbance of the powers of sensation or volition; and hence its existence is often unsuspected, until revealed by a post-mortem examination. Those cases usually (though not always) commence with paroxysms of severe pain, generally of limited extent, in some part of the

* See Combe on Mental Derangement, page 251, American edit.

† See *ibid*.

‡ See *American Journal of Medical Sciences*, page 157, for May 1840.

head, and not unfrequently vomiting; the skin is hot and dry, the pulse either slower than natural, or small and frequent; and though there is no real mental derangement, yet the patient almost always feels an unpleasant sensation in the head, either more marked or different from what is usual in attacks of ordinary fever. Of this description, are many cases of chronic abscess, related in Abercrombie's work on the Brain. And we should place in the same class, the second case related by Professor M'Naughton, in the *American Journal of Medical Sciences*, for July 1842. Many of these cases resemble, in the prominent symptoms, mild attacks of fever; and it must be confessed that we yet possess no certain means of diagnosis. But may we not hope that a more careful observation of symptoms will yet enable us to detect disease in this part of the cerebral substance, as well as on its surface, or in the medulla oblongata? Practitioners have been too much in the habit of considering the brain normal, so long as the intellect remained sufficiently sane to answer questions correctly, and there was neither paralysis nor convulsions; and hence those hitherto less intelligible sensations, as pain, heaviness, dulness, vertigo, and other feelings in the head, have been too little attended to. The foregoing observations were originally suggested by an attendance on a legal process for proving the validity of a will; and they are now published solely for the purpose of calling the attention of the profession to the important fact, that reported cases of disease are only valuable when all the circumstances are accurately and minutely detailed; and to report accurately cases of cerebral disease, we must first study, minutely and correctly, cerebral anatomy. It is proverbial that medical science abounds in false theories; but we believe even a slight examination will shew that false facts are far more numerous than theories.*

* "It is a melancholy truth, that there is, perhaps, no department of human knowledge in which there is so great a want of correctness, with regard to recorded observations, as well as reasonings, as in medicine. We ought therefore to be strongly fenced against the inroads of error in others, as well as ourselves. It was a favourite saying of Dr Cullen, that there are in physic more false facts than false theories."—*Sir Gilbert Blane's Elements of Medical Logic*, 2d edition, p. 242.

It may be here remarked, that microscopical observations, which have been carried on with great activity for some years past, particularly on the Continent, are likely to throw much light on the pathology of the brain. Dr John Hughes Bennett, in a lecture on Histology, and the Use of the Microscope, published in the *Lancet* of 10th May 1845, says,—“In pathology, how vague are the ideas attached to inflammation, softening, tubercle, and other morbid processes. On these a flood of light has been thrown by the microscope. This subject, indeed, has been compara-

VI. *Professional Phrenologists and Party Phrenologists.*

TO THE EDITOR OF THE PHRENOLOGICAL JOURNAL.

CHORLEY, May 17. 1845.

SIR,—A very strange-looking person, calling himself Dr Bushea, lately paid me a visit, for the purpose, as he said, of taking my opinion on the probability, or otherwise, of his getting engagements in Chorley and its vicinity, as a professor of Phrenology, to furnish verbal or written developments, at various prices, according to quantity. Partly through the opinion given him, and partly through some very untoward circumstances which had accompanied the “professor” from Bolton, where he had been previously practising, he and his travelling companions left our good town the same evening for Lancaster, and thus left us, alas, with our heads unexamined, and our pockets untouched.

Soon after the departure of the great “doctor,”* another professor of Phrenology arrived among us, professing, of course, to be greater far than the celebrated Bushea. Indeed, it would seem, according to the details given, that the self-styled doctor is a professor of Phrenology precisely in the same sense as some among us are professors of Christianity, with but slender knowledge of its true principles and spirit, and no concern whatever about applying it to any higher or holier use than that to which he of the “swell mob” applies his black art. Pity it is there should be mere

tively little studied, and yet I know of none which is likely to yield such interesting and important results to a microscopic inquirer. The apathy of the profession, however, on this point, has hitherto been most singular.

. Notwithstanding several years have elapsed since Ehrenberg demonstrated the tubular structure of the brain and nerves; notwithstanding that his observations have been repeated and confirmed by every minute anatomist of the age, where is the physician in the charge of lunatic asylums who has ever even attempted to determine whether the minute tubes and structures are affected in mental disorders? I would ask, does it not seem surprising that pathologists would rather have recourse to the wildest theories, talk of molecular changes, use terms which have no precise meaning, when for a few guineas they could possess an instrument by means of which they can see the molecules of which they talk, and observe structural changes of which they have no idea? I have lately had many opportunities of satisfying myself that death may be occasioned by structural changes in the brain, which are altogether imperceptible to ordinary sight, and which have escaped the careful scrutiny of the first morbid anatomists in Edinburgh.”

—ED. P. J.

* In vol. xv., p. 187, we gave some account of this “doctor’s” doings in Sheffield, and we have since occasionally heard of his similar proceedings elsewhere.—ED.

empty professors in either case. But then, neither Christianity nor Phrenology is proved to be false by its professed friends proving false. Doubtless, there are quack doctors in both, as well as in the medical and all other professions. Noisy puffing pretenders abound. Puffs from the press, puffs from the platform, and puffs from the pulpit, are truly scattered around us "thick as blackberries." The public has swallowed puffs till habit has rendered them pleasing to the palate; and it would seem to demand an agency far more potent than that of a prince, to put down with a plain tale the Falstaffs that in our day go swelling, swaggering, and, in one way or another, swindling, through this *enlightened* land.

This, however, is by no means a valid reason why plain tales of sober truth should not be told. And so now to my plain tale of positive facts.

First, then, of itinerant professors of Phrenology. I have carefully examined the phrenological charts of several of these, and compared, in various ways, both these charts, and the developments which the professors had given; and obtained, as the result, a greater sum total of self-contradiction, confusion, and unmeaning phraseology, than could be presented in print within the compass of an ordinary sized octavo volume. I have seen, in some instances, two written developments, obtained by the same person from the same professor, at five shillings each, as totally different from, and as completely opposed to, each other, as if the applicant had taken two heads to be examined instead of one. The same organ that was called large in one development was put down small in the other; and this, and its consequent false predication of character and talent, added to a species of enigmatical and mystical mode of expression, rendered the phrenological knowledge, purchased at a cost of ten shillings, wholly unintelligible, useless, and worthless to the purchaser. Of course, he who has thus been cheated, if not previously a phrenologist by study, becomes, through the teachings of his pocket, "a steady, sturdy, staunch believer" in the radical dishonesty and dangerousness of Phrenology.

Nor is it marvellous that a professor of Phrenology should involve his predications in discrepancies and contradictions, when his own printed chart contains the following expressions, which are quoted literally from one of them:—Moderate Concentrativeness—"fond of variety;" Moderate Adhesiveness—"very fond of variety." Thus, moderate 3 and 4 are made a lower and higher degree of love of variety. Again, opposite "large Combativeness" are these words,—*"Resolution, decision, energy, great personal courage;"* op-

posite "large Destructiveness,"—"Energetic, resolute, and decided;" opposite "large Caution,"—"Enabled to act with great decision;" and opposite "extra large Firmness,"—"Great decision and resolution, energy, and courage." Now, according to these expressions, four different organs are represented by this professor as producing the same effects. They all manifest resolution, decision, energy, and courageousness. Then small Hope and the abuse of Cautiousness are both said to superinduce gloom, melancholy, and despondency. And large Cautiousness and large Secretiveness are both put down "prudent and cautious." Upon the supposition that two, four, or more organs, either by being of the same relative sizes, or by being of different sizes, give forth just the same manifestations, it is, indeed, most difficult to conceive how any professor of Phrenology can possibly predicate, with any degree of precision, any thing at all respecting any head whatever. One head may have large Caution and small Hope, and another large Hope and small Caution, and yet both be alike fearless, or both alike fearful. One may have large Caution and Destructiveness, and small Combaticiveness and Firmness, while these four organs are reversed in another head, and yet both be alike resolute and courageous, or both alike timid and cowardly. In this case there is no such a thing as Phrenology; and all its professors are professors of a nonentity, except so far as getting payment for professing goes.

And when money has thus been obtained under false pretences, and either merely flattering or absolutely useless developments have been given, all the sins of omission and commission are carefully debited in the popular ledger to the account of Phrenology. Nor are the antiphrenologists the only persons who unfairly tax and unjustly accuse Phrenology. I have been told by believers in the great truths of the science, that it proves doctrines and dogmas, which, if they were proved at all, would inevitably demonstrate Phrenology to be absurd and suicidal.

Thus, one has maintained that Phrenology annihilates the idea of Deity, and another affirms that it annihilates atheism. By Calvinist believers in Phrenology, I have been solemnly assured that it puts beyond all controversy and doubt the truth of Calvinism; while, by others, I have been as earnestly certified that it wars to the death with the dogmata of Calvin. Owenites have urged Phrenology on me as demonstrative evidence of man's entire irresponsibility, until reminded that, if that be true, no man is responsible for believing in, and contending for, human responsibility, and opposing this prin-

ciple of Owenism. Now, it is abundantly obvious, that Phrenology be of a party spirit, it cannot be a principle of universal truth. It cannot teach responsibility and irresponsibility, free agency and fatalism, innate depravity and innate purity, atheism and theism, and yet be the very essence of consistency and veracity.

The sad truth is, that such party phrenologists gauge Phrenology exclusively by their own prejudices. We have heard of theological sectarians, who had, by a peculiar process, decided what doctrines the Bible ought to inculcate, then exclaim, "If my opinions are not scriptural, I'll burn the Bible." And by some professors of Phrenology, and some party phrenologists, Phrenology is treated in the same ungracious manner. But as Phrenology is the exposition of great natural facts, divinely instituted, it will outlive all such ingratitude, subduing all confusion, establishing general harmony, and returning good for evil. It will ultimately enlighten, and elevate, and bless mankind, despite the coarse, the sinister, and the sectarian treatment which it receives at their hands.

H. CLARKE.

VII. *Remarks on the Variation of Weight of the Human Brain, and Inaccuracies in reporting Weights.* (From the "Northern Journal of Medicine," No. X., February 1845.)

It appears from Mr Goodsir's report of the *post-mortem* examination of Dr Abercrombie,* that the weight of the brain was 63 ounces avoirdupois or imperial weight. This we stated, without mentioning the kind of ounces, in our account in the December number of this Journal, and added, that it was only one ounce less than the weight of one of the largest brains known, namely, that of Cuvier. We knew that Cuvier's brain had been represented as about 64 English ounces; but, on looking into the accounts, we regret to find

* "*Head.*—The skullcap was thick. The *crista galli*, the posterior clinoid processes, and the bones of the head generally, were powerfully developed.

"The brain was softer than might have been expected at the time of the examination (fifty hours after death). There were no traces of old or recent effusions of blood. The internal carotid, the circle of Willis, and all the arteries of the organ, were studded with much atheromatous deposit, and the internal carotids at their last curve were slightly dilated. The organ was of great size, and weighed 63 oz. avoirdupois. The ventricles were capacious, without an increased amount of serum, which appeared to correspond to the great size of the cavities."—*Edin. Med. and Surg. Jour.*, vol. lxii., p. 231.

so many discouraging contradictions on this subject—a too frequent result when medical men meddle with figures beyond what they are familiar with.

We cannot help giving a specimen of these contradictions, and pointing out their source, on a subject on which correct knowledge is desirable. In the *Archives Générales de Médecine*, vol. xxix., we find a statement, apparently on unimpeachable authority, to the effect that Cuvier's brain weighed 3 pounds 11 ounces some odds; and that the cerebellum alone weighed 6 ounces; but the kind of weight is not indicated. But Tiedemann, in his elaborate paper in the *Philosophical Transactions*, on the Negro brain, represents the weight of Cuvier's brain as 4 lbs. 11 oz. odds, troy weight, or 59 troy ounces. We discover, however, on inspection, that he brings out the 59 troy ounces, which rather exceed 64 ounces avoirdupois, by an erroneous calculation. He first assumes, on what ground he does not mention, that the weight given in the *Archives Générales*, namely, 3 lbs. 11 oz., is avoirdupois weight; and wishing to convert this into troy weight, he forgets that the troy ounce exceeds the avoirdupois ounce by 42.5 grains, and, making the two ounces alike, he at once sets down the 3 lbs. 11 oz. supposed avoirdupois as equivalent to $3 \times 16 + 11 = 59$ ounces troy. If the above 3 lbs. 11 oz. from the *Archives* be really avoirdupois, the weight of Cuvier's brain in troy ounces was not 59, but 53.7; for 59 is to 53.7 as 480, the number of grains in the troy ounce, is to 437, the number of grains in the avoirdupois ounce. The ordinary French pound is the "poids de marc;" and this, most probably, is the kind of weight referred to, which Tiedemann mistakes for avoirdupois. This pound is equivalent to 7561 troy grains, and the French ounce is equivalent to 472 troy grains. Cuvier's brain was equal to 27,875 troy grains, or to 58 troy ounces. But 58 troy ounces are equal to 64 ounces avoirdupois, or imperial weight, because 58 is to 64 nearly as 437, the avoirdupois ounce, to 480, the troy ounce. It is plain, then, that Cuvier's brain is usually represented as weighing 64 English ounces, on the assumption that the 3 lbs. 11 oz. odds, spoken of by his biographer, are "poids de marc."

According to this view, then, our statement was correct, that Dr Abercrombie's brain was only one ounce short of the weight of Cuvier's.

The contradictions respecting the weight of Dupuytren's brain are hardly less numerous than those in the case of Cuvier's. In the *Archives Générales* there is a particular account of the *post-mortem* appearances, in which no mention whatever is made of the brain having been weighed. In the

London Medical Gazette it is rated at 2 lb. 14 oz., and the cerebellum alone at 4 oz. 5 grains. In the paper before referred to, Tiedemann makes the weight of Dupuytren's brain 4 lb. 10 oz., which he says is troy weight. But this cannot be relied on, unless we obtain some assurance that he did not bring out the troy pounds and ounces by the same process by which he made the same estimate in the case of Cuvier's brain. But, as this seems to have been the case, the real weight in "poids de marc" must have been 3 lb. 10 oz., equivalent to 27,408 troy grains, or 57.1 troy ounces; and this quantity, reduced to avoirdupois or English imperial ounces, equals 62.87.

Thus, if these corrections be well founded, the weight of the three brains stands as follows:—Dupuytren's 62.87, Abercrombie's 63, Cuvier's 64, in avoirdupois or English imperial ounces.

The following extract from the results obtained by Sir William Hamilton, Professor of Logic in the University, in his elaborate inquiry into the weight of the human brain, will exhibit the high relative development of the above three brains:—"The following, among other conclusions, are founded on an induction drawn from above *sixty human brains*—from nearly three hundred human skulls, of determined sex, the capacity of which, by a method I devised, was taken in sand, and the original weight of the brain thus recovered. * * * The adult male encephalos is heavier than the female; the former nearly averaging in the Scots head 3 lb. 8 oz. troy (48 avoirdupois oz.); the latter 3 lb. 4 oz. (nearly 44 avoirdupois oz.), the difference 4 oz. (4.38 avoirdupois oz.) In the male, about one brain in seven is found above 4 lb. troy (52.66 avoirdupois oz.); in the female, hardly one in one hundred."

From Dr John Reid's Tables* it appears that the average weight of the encephalon, in fifty-three males and thirty-four females, was—male, 50 oz. 3½ drams avoirdupois; female, 44 oz. 8 drams, giving a difference between them of 5 oz. 11 drams.

[The foregoing remarks on the confused and inaccurate manner in which weights of brains have been reported, are calculated to be very useful, and, we hope, will lead to greater exactness in future. Some of Dr John Reid's Tables were given in our 16th volume, p. 358, where may be found also some remarks by that cautious and judicious physiologist, shewing the worthlessness of general conclusions drawn from any but a very large number of cases.—ED. P. J.]

* London and Edinburgh Monthly Journal of Medical Science, vol. iii. p. 322.

VIII. *M. Bourgery on the Relations, in point of Weight, of the Nervous Parts of Man, and some Animals.*

On 23d September 1844, M. Bourgery read before the French Academy of Sciences, a memoir on the above subject. Without ascribing much value to it, we subjoin the following report, which appeared in the *London Medical Gazette* of 3d January 1845 :—

The particular object of the author's memoir was to determine the relations in absolute weight of the nervous organs of man and several mammalia, and to draw such conclusions as the facts naturally suggested. Proceeding thus, M. Bourgery finds that, the mean weight of the encephalon, or central nervous mass, being 20393·5* grains troy; the cerebral hemispheres stand for 16940·46 grains of that quantity, the cerebellum for 2176·7 grains, the cephalic prolongation of the cerebro-spinal axis for 1312·2 grains, the optic thalami and corpora striata taking 879·9 grains; the medulla oblongata, with the Pons Varolii, 432·2 grains; and the spinal marrow 710·1 grains. It follows from this that in man the cerebral hemispheres, the peculiar organs of psychological manifestation, include a nervous mass which, with reference to the other portions of the apparatus, is *four* times that of all the rest of the cerebro-spinal mass, *nine* times that of the cerebellum, the putative organ for the combination of voluntary motions, nearly *thirteen* times that of the cephalic stem of the spinal marrow—comprising the organs of the senses, with the exception of those of olfaction, those for the transmission of general sensibility, and those of respiration—and *twenty-four* times that of the spinal marrow, the cord for the conduction and incitation of the sensibility and motions of the whole body, the viscera included. This predominance of the cerebral hemispheres, so considerable in man, declines decidedly when we pass from man to those animals which most resemble him; and it diminishes gradually in these from the dog to the horse, cat, ox, and sheep; in other words, nearly in the ratio of intelligence. The following are the conclusions which the author draws from his inquiries :

1st, As it follows, from all the researches of modern science, that in man the extent and variety of intelligence

* [That is to say, 46·667 oz. avoirdupois, a weight which approaches the mean weight of the adult male English brain between twenty and thirty years of age, which, according to Dr Boyd, is 46·178 ounces avoirdupois; but this is without the spinal marrow, which is included in M. Bourgery's estimate.—*Vide* Dr Boyd's Table, end of Wagner's Physiology, by Willis.—ED. GAZ.]

are generally in proportion to the anatomical quantity of the cerebral mass, and that this determination becomes rigorous when to the quantity the physiological condition of quality is superadded; so also in animals do the extent and variety of their instincts appear to be in relation with the quantity of the cerebral substance in each of them, the question of quality between individuals of the same species still considered. 2d, The sum of the instincts in animals compared with one another is by so much the greater as the proportional weight of the cerebral hemispheres, and perhaps also of the cerebellum, is more considerable in relation to that of the nervous centre of the cerebro-spinal axis. 3d, Life being nothing more than a harmony between accordance and antagonism, in other words, a perpetual struggle of organisms with physical agencies, the nervous system, the material agent of life, performs three kinds of functions—the first, spontaneous, or proper to the living being, and which cannot proceed solely from the agency of the general laws of nature; the second, physical; and the third, chemical; these being severally shaded one into another, by means of mixed intermediate functions. The spontaneous functions indicate the destination of the living being, the others form relations for the support of the material body in harmony with the laws of chemistry and general physics.

These conditions stated, M. Bourgerie infers, with reference to the question of relative quantity in the nervous substance: 1st, That a cerebral nervous mass four times the size of all the rest of the cerebro-spinal organs is required for the psychological manifestations of man. 2d, The instincts of animals do not require more nervous substance than a quantity five or six times less than that which is proper to these higher manifestations. The quantity of nervous substance necessary to the organs for their several functions diminishes gradually in the following order:—

- (a.) The senses and the nerves of general sensibility.
 - (b.) The physical function of motion.
 - (c.) The physico-chemical function of respiration.
 - (d.) The chemical function of digestion.
 - (e.) The chemical function of the organic elaborations;
- and,
- (f.) That of assimilation.

IX. *On the Relative Size of the Male and Female Head at Birth.*

In a "Memoir on the Sex of the Child as a cause of Difficulty and Danger in Parturition," by Dr James Y. Simpson, Professor of Midwifery in the University of Edinburgh, published in the *Edinburgh Medical and Surgical Journal*, vol. lxii., p. 387, the author, after mentioning some observations made by Dr Clarke in the Dublin Hospital, and recorded in the *Philosophical Transactions* of 1786, and which prove that, at birth, as at subsequent periods of life, the male is usually of a greater weight and size than the female, proceeds as follows :—

"The general volume, however, of the *body* of the child is not, in relation to the mechanism of parturition, a matter of such immediate importance as the size of the *head* itself, the facility or difficulty of the progress being principally dependent upon the relative size of the latter. The greater weight and volume of the male than the female child at birth might, *à priori*, entitle us to calculate that the head of the male would, in correspondence with the other parts of the body, be larger than the head of the female. In such an inquiry, however, as the present, it is better to refer to direct arithmetical facts than indirect though probable inferences ; and Dr Clarke has left us a series of measurements of the heads of male and female children, at birth, that are valuable in giving us more precise ideas upon this point. His observations were made upon the 60 male and 60 female children whose respective weights we have already detailed. 'For measuring their heads, I made use,' he observes, 'of a piece of painted or varnished linen tape, divided into inches, halves, and quarters. I took *first* the greatest circumference of the head from the most prominent part of the occiput around the frontal sinuses ; and, *secondly*, the tranverse dimensions from the superior and anterior part of one ear across the fontanelle to a similar part of the other ear. These data appeared to me the most likely to afford data for determining the respective sizes of the brain in the different sexes.'—(P. 358).

"The result of Dr Clarke's measurements may be exhibited in the following manner.

	Absolute dimensions in		Average dimensions in			
	60 Males.	60 Females.	60 Males.		60 Females.	
	Inches.	Inches.	Inches.	Lines.	Inches.	Lines.
Circumference of head, }	839	817	13	11½	13	7½
Dimensions from ear to ear, }	445½	433½	7	5⅞	7	2½

“ The difference brought out in the preceding table, between the male and female head, may appear more precise if we reduce them to decimal figures.

	Average circumference of head.	Average dimensions from ear to ear.
	Inches.	Inches.
In male child,	13·983	7·429
In female child,	13·617	7·221
Difference,	0·366	0·208

“ According to these observations upon new-born children, it would appear that,—

“ 1. The head of the male infant, when measured across from ear to ear, over the fontanelle, is about 2½ lines, or nearly two-eighths of an inch greater than that of the female.

“ 2. In circumference, the head of the male is 4½ lines, or almost precisely three-eighths of an inch greater than that of the female. Hence,

“ 3. The *transverse* diameter of the male head is nearly one-eighth of an inch greater than the transverse diameter of the head of the female child.”*

* “ Calculating upon the accuracy of Dr Clarke’s linear measurements of the foetal head, it would appear that the *surface* of the cranium of the male infant (*above* the circumferential line of measurement), is about 27·8 square inches; that of the female about 26·3 square inches. The arch of the male cranium, at birth, is therefore, superficially, upwards of one square inch greater than that of the female. To state it in other words, the proportion of the surface of the head of the male new-born child to that of the female is nearly as 19 to 18,—or the surface of the head of the female is one-nineteenth part less than that of the male.

“ Since these remarks were sent to press, I have incidentally met with the following remark in Dr Forbes’s Quarterly Medical Review, vol. x. p. 492:—‘ M. Nevermann gives us the results of the measurements of the heads of 384 children, by Professor Thulstrup of Christiana, which fully bear out Dr Clarke’s statements.’ ”

II. NOTICES OF BOOKS.

I. *Zeitschrift für Phrenologie*, No. VI. Heidelberg: Karl Groos. 1844.

The German Phrenological Journal, No. VI., June 1844.

Edited by GUSTAV VON STRUVE, and EDWARD HIRSCHFELD, M.D.

The first article in this Number is a continuation of "The Laws of the Nervous System considered in relation to Phrenology, with particular remarks on Longet's latest work on the Anatomy and Physiology of the Nervous System," by Dr Edward Hirschfeld. Our readers are already familiar with most of the views which Dr H. presents. "Longet's chief object," says he, "has been to bring to a definite conclusion the important question of the distinct functions of the nerves of the spinal marrow; which has been completely settled; but the same result," he adds, "has not been attained in regard to the nerves of the encephalon." Dr Hirschfeld does not enter into the discussion of this last subject, but reserves it for his next communication.

In Article II. are continued Mr Combe's Letters on the application of Phrenology to the Fine Arts.

Article III. consists of a translation by Mr Von Struve, of an article which appeared in this Journal, vol. xvi. p. 209, entitled "Phrenological View of the Treatment of the Insane without Mechanical Restraint on the Person."

Article IV. is an "Application of Phrenology to the elucidation of the mental character of Political Parties," by Dr Gustaf Kombst. He remarks, that "the greater portion of mankind receive their political and religious opinions from their parents, friends, and associates. As, in general, the organization of individuals who stand in these relations towards each other is similar, there will be a natural proclivity in their mental tendencies towards similar views and impressions. It is only when there is a striking difference between the organization of a child and that of one of his parents, the father, for example, that political opinions are likely to develop themselves in the son in contradiction to those of the father. We certainly see such cases occur both in political and religious contests; but they are rare. As a general rule, we may confidently assume it to be a law of nature, that similar mental organizations, when exposed during their development to similar external influences, will present similar results.

"An individual has a natural predisposition towards CON-

SERVATISM, when to a moderate or even considerable development of the observing and reflecting organs (in general, however, the former predominating), he adds large Veneration, Self-Esteem, Firmness, and Combativeness. The intellectual organs of Order, Time, and Eventuality, are generally predominant, Comparison and Causality are subordinate in size, and Acquisitiveness is less developed.

"The combination that leads to **LIBERALISM** is an intellect predominating over the affective faculties. The essential organs are, large Causality, Comparison, Love of Approbation, and Acquisitiveness. The organs developed only in the second degree are Conscientiousness, Combativeness, Amativeness, Philoprogenitiveness; and the organs deficient are Veneration, Self-Esteem, and Wonder.

"The essential organs of the **RADICAL** are Causality, Comparison, Destructiveness, Combativeness, Firmness, frequently Conscientiousness, Self-Esteem, and Ideality. The knowing organs are frequently inferior in development, while Veneration and Wonder are deficient. Not unfrequently, also, we find Acquisitiveness considerably developed, and Love of Approbation larger than Self-Esteem."

Dr Kombst adds, that these observations apply only to large masses of men; and that the deviations from the rule, which are numerous, are to be ascribed to many peculiar causes which are too extensive to fall within the scope of his communication. The exceptions, however, in these instances, as in those which occur in Quetelet's celebrated work *Sur l'Homme*, when traced to their causes, are found only to prove the rule.

Article V. is "On the Reaction of the Organs of the Brain," by Mr Von Struve. He remarks that, while physiologists are quite familiar with the fact, that the *same* stimulus when applied to *different* nerves produces *different* effects, corresponding to the different functions of the nerves; for example, that the same mechanical, or chemical, or electric stimulus, will produce, when applied to a nerve of sensation, pain—to a nerve of motion, muscular contraction—to the olfactory nerve, the sensation of smell—to the retina of the optic nerve, a flash of light—and to the auditory nerve, a sensation of sound; yet they have not traced the same principle as applicable to the different parts of the brain. "A multitude of cases," says he, "have been observed, in which a physical stimulus applied to different organs has produced different effects, corresponding to the organs to which it was applied; exciting, for example, Tune to the production of music, Self-Esteem to the manifestation of self-confidence and pride, and

so forth. In particular, also, many cases have been observed in which the same kind of injury has produced different results, according as it was applied to particular organs of the brain, the disturbance having corresponded to the functions of the organs injured. He quotes, in illustration, the case of Dr McClellan's patient in Philadelphia, mentioned in Mr Combe's *Notes on America*, vol. i. p. 335-338, and several others.

Article VI., entitled "Choulant, Volkman, Lelut, Lauvergne, and Phrenology," is communicated also by Mr Von Struve. "These four physicians," says he, "view Phrenology from four completely different sides. Choulant confounds it with Cranioscopy, as if the philosophy of the mind and the philosophy of the skull were not as widely different as the mind and the skull themselves are. Volkman is acquainted with only the theoretical portions of Gall's writings, and even with them very imperfectly. Lelut knows, to some extent, the theoretical aspects of Phrenology, and is not a stranger to practical cranioscopic observations; but he is rather a scoffer at, than a serious scientific inquirer into, the subject. Lauvergne, the old experienced physician, who, in the course of an active life, has allowed no opportunity to escape of comparing development of brain with manifestation of character;—Lauvergne, the well grounded practical phrenologist, has observed much that Choulant and Volkman did not observe, because of their want of the requisite previous knowledge, both theoretical and practical, and which Lelut did not perceive, because his prejudiced opinions had disturbed the freedom of his vision."

Mr Von Struve enters into a more particular examination of the objections stated by the three opposing authors. He remarks, that "Lelut acknowledges in his preface that he began by rejecting, *à priori*, the truth of Phrenology; in which state of mind it was impossible for him to draw unprejudiced inferences. All his observations, and all the reasonings founded on them, have a predetermined object, namely, to prove, *à posteriori*, the conclusion which he had already adopted *à priori*. He touches, therefore, only on what he considers to be the weak side of Phrenology. Against this he declares war, and allows himself every licence of an enemy. He does not fairly bring forward both sides of the question, but breaks the scales of justice and casts away the beam, and condemns every thing from beginning to end. He comes forth not as a judge, but as an accuser. His only object is to justify the *à priori* opinion which he has chosen to adopt: that Phrenology is untrue." "He attacks not the subject itself, but the writings of Drs Gall and Spurzheim.

He speaks occasionally of this or the other principle of the science, but never directly and exactly. From the statement of every one of the principles which he discusses he leaves out some essential limitation, or adds to it an unauthorized extension, or alters it, now in one respect, and then in another; and hence, the thing which he overthrows is, in point of fact, not a principle of Phrenology, but only something which a reader not very skilful in Phrenology may naturally take to be such. The changes which he makes are often apparently very small, but in reality they are always sufficiently great to make the whole difference between phrenological truth and hostile misrepresentation." Mr Von Struve then enters into an exposition of numerous instances, in which this disingenuous course has been followed; but our readers are already so familiar with this kind of tactics, and its results, that we abstain from translating the details.

In the seventh article is noticed "A Short Description of a number of Institutions for the Insane in Germany, Belgium, England, Scotland, and France, by Dr G. J. Popp, practising physician in Pfarrkirchen in Lower Bavaria, published in Erlangen in 1844." The author knows nothing of Phrenology, and passes a high encomium on the Hanwell Asylum, without the slightest conception that this institution was first brought into its high condition by a phrenologist, Sir W. Ellis; that it afterwards became greatly deteriorated, under the management of the non-phrenological Dr Millingen; and that it has since re-assumed, if not surpassed, all its former excellence under the direction of Dr Conolly and Dr Davey, both of whom are well-known phrenologists. "So long," says the German Journal, "as our physicians who devote their attention to the treatment of insanity shall abstain from availing themselves of the lights of this science, as they have hitherto done, our lunatic asylums cannot make any great advances. The acquirements and personal character of a director, even when ignorant of the functions of the brain, or possessed of erroneous views of them, may, if they are of a very high order, do much good in such an institution; but even such a man will never reach the same degree of usefulness, which, with the same qualities and attainments, he might easily have realised, if to them he had added a truly scientific knowledge of insanity. Besides, his improvements will be in great danger of perishing with his person; they will be fortunate accidents merely, and never become deeply rooted as parts of a system. Only an extensive knowledge, both theoretical and practical, of Phrenology, will enable the

physician to remove the many deep-rooted evils which exist even in our best lunatic asylums. In our best institutions we still use strait-waistcoats, straps, and restraining chairs, all of which instruments are discarded from Hanwell, and not only from it, but from eight other institutions in Great Britain and North America. Over the whole world we perceive that the less capable the ruling minds are of guiding others by moral influence, the more extensively do they employ physical force, the instruments used being really correct indications of their own mental condition. The ruder the mind of the director, the harsher will be the means which he will find necessary to accomplish his object, and *vice versa*."

The Number closes with a variety of miscellaneous notices.

We continue to rejoice in the industry, vigour, and sound views, displayed in this Journal. The Number for September has reached us, and will be noticed in our next publication; but the subsequent Numbers, owing to the slowness of the conveyance by which they are forwarded, have not yet arrived.

II. *Popular Phrenology tried by the Word of God, and proved to be Antichrist, and injurious to Individuals and Families.*

By PHILIP JONES. London: Sherwood, Gilbert, and Piper, 1845. 12mo, pp. 23.

In modern days, this little work is a perfect psychological curiosity. It recalls to us the ages of alchemy and witchcraft; the time when there was no science of nature, but a world abandoned to the capricious sway of evil spirits; when diseases were treated by charms, and calamities sought to be averted or removed by incantations. In those days the Scriptures were the armoury of science as well as of faith; and natural phenomena were tried by texts, instead of alembics and crucibles. In our own age, Archbishop Whately has laid it down as an irrefragable maxim, that, if any error be advanced in natural science, the Christian is bound to bring against it the *natural* evidence of its unsoundness, and is not entitled to save himself this trouble by hurling against it mere texts of Holy Writ; but Mr Philip Jones sets at nought the authority equally of the Archbishop and of common sense, and insists not only on trying Phrenology by Scripture alone, but on firing against it mere texts, whether relevant or irrelevant; sending them forth like the discharge of a cannon loaded promiscuously with old nails, broken bottles, stones,

and other trash. Apparently, he would prove or disprove the theorems of Euclid by texts, and allow of no other evidence. That we may not be supposed to be selecting particular passages however, and caricaturing his work, we shall present the first and the greater part of the second pages verbatim, premising that there is a vignette on the title-page, representing a great fire, in which are lying the common phrenological bust and three books. On the books are inscribed the titles, "PHYSIOLOGY," Dr Combe's apparently;—"COMBE ON THE CONSTITUTION OF MAN;"—and "CATECHISM OF PHRENOLOGY." Below them and the fire is printed the text, "The fire shall try every man's work, of what sort it is," 1 *Cor.* iii. 13; and greatly to the credit of these works they withstand it well; for although the flames are fierce and high, and burning embers are carried up in awful wreaths of smoke, which encircle them on every side, not a stain is seen on the surface of the bust, and not a leaf is curled, much less consumed, in any of the books! Mr Jones, without preface or introduction, commences thus:—

"*Anti-Phrenologist.*—When I look at that engraving, it reminds me—'That man by searching cannot find out God to perfection.' (Job xi. 7.)

"*Christian.*—I suppose he is a noted phrenologist? How intense he is represented to be looking at the skull; he seems bewildered in his own notions.

"*A.-P.*—Indeed he does, and I am not surprised at it, for he is represented to be meditating upon the mind of man.

"*C.*—Do phrenologists think that the mind of man is a substance?

"*A.-P.*—We read in M'Phun's Catechism on Phrenology—that 'Phrenologists, with philosophers in general, imagine the *mind* to be a simple and indivisible *substance*,' p. 17. And some noted phrenologists 'contend that *mind* has *no existence*.' And some 'consider that we possess *no such a thing as an immaterial soul*.'

"*C.*—It is very evident God is not the author of Phrenology; and I fear it is one of the many systems that have been imported into this country by the agents of the 'man of sin.'

"*A.-P.*—I believe it to be an *old invention* of the devil, with a new name; and it is one of the means whereby the devil leads men further from God.

"*C.*—Do you think that Christians are aware that *it tends to infidelity*?

"*A.-P.*—I fear the mapping out of the head into so many organs, and the name given to each, has so captivated the admirers of the system, that they have not concerned themselves about the evil likely to result from it. And, indeed,

the arguments that are brought forward in favour of the system are of such a deceptive character, that the unsuspecting may easily be deceived by them.

“C.—You may indeed call it an *old invention* ; for Eve was so enchanted with the idea of becoming wise, that she did not concern herself about the sin of disobeying the will of God. Consequently, she brought a curse upon herself and offspring ; and instead of becoming wise they became fools. But before we assert that the devil is the author of Phrenology, we ought to try it by the Word of God.

“A.-P.—We certainly are commanded ‘not to believe every spirit, but to try the spirits whether they are of God.’ (1 John iv. 1.) Therefore, ‘to the law and to the testimony, if they speak not according to this word, it is because there is no light in them.’ (Isa. viii. 20.) We will begin at the first chapter of Genesis. When God had ‘created the heavens and the earth,’ ‘He created every moving thing in the waters after *their kind*, and every fowl of the air after *their kind*, and every beast of the earth after *their kind*, and cattle after *their kind*, and every thing that creepeth on the earth after *their kind*. And God created man in *His own image*, in the *image of God* created He him, male and female created He them.’ And God said to all, ‘be fruitful and multiply.’ Therefore, the seed is sown according to the course of nature, but it is *made alive by the power of God*, ‘who giveth it a body as it hath pleased Him, and to every seed his own body.’ (1 Cor. xv. 38.) And by the means of air and food, blood is made, and *by the means of blood life is extended* all over the body ; therefore blood is called ‘the life of the flesh’ (Levit. xvii. 11) ; but, although it is ‘the life of the flesh,’ it does not create life. ‘God giveth life’ (Acts xvii. 25) previous to the circulation of the blood. So then, air, and food, and blood, are only the *means* which God hath ordained to *support* life in the body. And because ‘man knoweth not the power of God, neither ‘what is the way of the spirit,’ nor ‘how the bones do grow,’ (Eccles. xi. 5,) they deny the works of God, who maketh all, and they ascribe to the means that power which belongeth only unto God. For ‘man doth not live by bread only ; but by every word that proceedeth out of the mouth of the Lord, doth man live.’ (Deut. viii. 3.) ‘He giveth us rain from heaven, and fruitful seasons, filling our hearts with food and gladness.’ And while He saith, Live, we live, but ‘if He gather unto himself His spirit and His breath, all *flesh* shall perish together, and man shall turn again unto dust.’ (Job xxxiv. 14, 15.) ‘For that which befalleth the sons of men befalleth beasts ; even one thing befalleth them ; *as* the one *dieth*, *so dieth* the other : yea, they

have all one breath ; so that a man hath no pre-eminence above a beast, for all is vanity : all go unto *one place*, all are of the *dust*, and all *turn to dust again*.' (Eccles. iii. 10, 20.)"

This is a fair specimen of the book ; and as we have no inclination to dislodge Phrenology from so distinguished a position as that of Antichrist, we leave Mr Jones in undisputed possession of the field.

III. *Gedanken über Phrenologie*. Von Dr B. COTTA, &c. Dresden und Leipzig, in der Arnoldischen Buchhandlung, 1845.

Thoughts on Phrenology. By Dr B. COTTA, Professor in the Mining Academy at Freyberg, in Saxony. 8vo, pp. 42. Dresden and Leipsic, 1845.

This little publication is conceived in an excellent spirit, and displays great clearness and vigour of thought. Dr Cotta desires that Phrenology should receive a scientific form, which, says he, is to be attained only "by means of carefully conducted anatomico-phrenological observations. Although these are still wanting, nevertheless the extensive experience and multiplied observations of phrenologists, and the accordance of these with many universally acknowledged truths, must be regarded as secure foundations of the whole doctrine, and it is to be expected that the seal of strict anatomical science will be added as the last form of authentication to its previously fully-stored record of natural truths." The general coincidence of the outer surface of the skull with the form of the brain, he regards as indisputable ; but it is the circumstance that no boundaries, and no differences of structure, between different cerebral organs, have yet been distinguished, which occasions the want of a strict scientific basis to be perceived in Phrenology. Difference of effect implies difference of cause ; and until this difference in the cause can be demonstrated, our observations must continue empirical. He justly observes, however, that the recent inquiries into the structure of the brain by means of the microscope, have been conducted by physiologists who did not avail themselves of the light thrown on the functions by phrenological observations ; and that, besides, similar difficulties have defeated their attempts to distinguish differences of structure between the motiferous and sensiferous columns of the spinal cord, and other parts of the organism which execute functions confessedly distinct.

In answer to the objection that one feeling passes imperceptibly into another, and that in the same way the organs may be supposed to have no special boundaries, but to blend insensibly one into the other,—as Veneration into Hope, and Firmness into Conscientiousness,—he remarks that in nature there is no such law as that of insensible transition or gradual blending. Wherever there is a distinction in nature, there is a distinct boundary, and the transition is made by a leap. The apparent exceptions are all referable to errors of the human understanding, committed by men who have arranged under different species animals or objects which really belonged to the same. No scientific boundary can be pointed out between the animal and vegetable kingdoms; but this arises from the imperfection of human knowledge, and not from the actual transition of the one into the other. There is no transition from species to species in the animal kingdom. The fox bears a closer resemblance to the wolf-dog than the wolf-dog does to the poodle or the bull-dog; nevertheless, there is a specific difference between the fox and the wolf-dog; a little leap is made by nature between them, which is never accomplished by mere transition. “The seedling plant grows imperceptibly into the large tree; yet a little leap is made in the formation of every new cell.” “The interior parts, or organs and functions of all individuals, are separated by distinct lines; no complete organ blends really into another; the stomach never makes a transition into the heart, or the leaf into the blossom.”

Dr Cotta maintains, that it is possible, by observing the *functions* of the brain, to distinguish them as *constituting separate faculties* of the mind. “If the *functions* be individual and separate, they must, according to all analogies and rules of logic, be referred to individual, and really distinct, although perhaps mechanically communicating, organs; and we can no longer say that the brain is the organ of thought and feeling, as the stomach is of digestion; but we must state that it consists of organs of Benevolence, of Veneration, and so forth, although their precise boundaries in its general substance cannot yet be demonstrated.”

He proceeds to shew that the *functions* are so different—Benevolence, for example, from Destructiveness—that transition of the one into the other is necessarily excluded; and he then notices the evidence by which the difference between the functions—in other words, the existence of distinct mental faculties—is proved.

In regard to the empirical evidence in favour of distinct organs corresponding to the separate functions, he confesses

in himself an inability, in many instances, to distinguish the separate organs.* He therefore divides them into six groups, and the brain into six regions ; namely, 1, the posterior basilar, (or cerebellum) ;—2, the lateral basilar ;—3, the posterior middle ;—4, the posterior upper ;—5, the upper or coronal ;—and, 6, the anterior ;—and adds, “ In general, it is to me not at all difficult to judge of these six regions, and I have constantly found accordance, and never contradiction, between them and the doctrines of Phrenology.” He farther observes, that the divisions of the functions, and of the brain, made by Carus and Choulant, are really groupings of Gall’s functions ; and that although these writers propound them as scientific, in contradistinction to Gall’s as empirical, they have not in reality supported their groups of functions by new facts, or their divisions of the brain by demonstrated boundaries ; so that their pretensions to a scientific character have no satisfactory foundation.

Dr Cotta does not, on account of his own inability, deny the existence of individual organs, but observes, that “ Whoever admits the soundness of certain general propositions, must necessarily concede that of the special facts from which they are deduced, or at least their high probability ; because it would be a singular coincidence, if, from erroneous facts, we should deduce correct general results. When one is convinced by personal observation that the functions of three or six regions of the brain have been correctly ascertained, it is only reasonable that he should ascribe to his own inability any failure on his part in distinguishing the individual organs discovered by others, out of which the groups were formed, which he has recognised as sufficiently supported.”

He does not consider Magnetism as sufficient to afford scientific evidence of individual organs, on account of the great although often unconscious influence of the mind of the magnetiser on the patient, and the indefinite nature of the manifestations.

* Dr Cotta loses sight of a point which should never be overlooked in discussing the merits of Phrenology ; namely, the distinction between the possibility of *proving* the existence and functions of the separate organs, and that of *applying* our knowledge of them in all cases. By means of instances of extreme development and extreme deficiency of single organs, they may be *proved* beyond the possibility of a doubt, although in individuals in whom they are equally combined, it may be difficult to point out the exact size of each, and, therefore, to apply our knowledge. Even in the latter instances, however, the power of discrimination will depend on the size of the perceptive organs in the observer, and on the extent of his practice in observing. We suspect that Dr Cotta is deficient in the latter.

The latter portion of his pamphlet is devoted to the consideration of the different mental faculties described by phrenologists. On this subject he says,—“ In spite of the before-acknowledged imperfection in my own powers of observation, I must admit that Phrenology, as a system of mental philosophy, is to me far more satisfactory than any other which I have ever known.” He notices the admirable distinction which Phrenology establishes between good and bad actions; good is the result of normal, bad of abnormal, activity of every faculty. He treats of partial talents, peculiar dispositions, partial idiocy, and partial insanity, as all explicable in a clear and natural manner by phrenological principles; and shews how, by resolving Perception, Conception, Memory, and Imagination, into mere *modes of action* of distinct primitive faculties, innumerable phenomena of mind, which have puzzled metaphysical authors of all ages, are rendered simple and intelligible.

He presents, in a tabular form, a view of the faculties admitted by Gall and his followers, and those recognised in the “ Scotch philosophy,” drawn by him from “ Ad. Garnier’s *Psychologie*,” (Paris, 1839); and there is a surprising coincidence between them: but we are left in the dark as to the authority on which Garnier ascribes many of the faculties to the Scotch school of metaphysics.

Dr Cotta strongly recommends to his countrymen Mr Noel’s work on Phrenology, which we have formerly noticed, (vol. xv., p. 252), as an introduction to the science; an advice in which we fully concur.

This pamphlet is one of the best, probably the most closely reasoned and scientific, which we have seen from the pen of a German author; and it will be of great use in dispelling the prejudices against Phrenology which are still too common in Germany, and especially among that class which, from its occupation with science, should be the first in removing obstacles from the way of new truths.

IV. *Remarks on the Report of Her Majesty’s Commissioners on the Poor-Laws of Scotland, presented to Parliament in 1844, and on the Dissent of Mr Twisleton from that Report.* By W. P. ALISON, M.D., F.R.S.E., &c., Professor of the Practice of Medicine in the University of Edinburgh, &c. Edinburgh: W. Blackwood and Sons, 1844. 8vo, pp. 302.

In this and several previous publications on the condition of the Scottish poor, Dr Alison has earned a title to the highest respect and admiration of intelligent philanthropists.

To extensive personal knowledge of the subject, he adds all the intellectual and moral qualifications necessary for setting forth, in clear and persuasive terms, the wrongs of the helpless and destitute among his countrymen, and for shewing what is the wise and only effectual mode of curing, as far as may be, the almost incredible evils which attend the existing management of the poor. It was mainly through the influence of Dr Alison that a Commission of Inquiry was appointed to investigate the subject; and in the Report of that Commission, he finds ample confirmation of the statements formerly made by him, as to the prevalence of destitution, the inadequacy of existing provisions for its relief, and the deplorable influence which it has on the morals, health, and happiness of the poor. Nay more, he has succeeded in shewing, that, even in a pecuniary point of view, there would be wisdom in giving the destitute, under proper regulations, a legal and easily enforced title to adequate relief, in all circumstances where otherwise they must starve, beg, or steal. Perhaps the most important service done by the works of Dr Alison on the state of the poor, consists in the full and satisfactory refutation of the dogma, still very prevalent even among philanthropists, that a certain and adequate provision against starvation would diminish the independence and foresight of the lower orders, and so increase, instead of lessening, the amount of destitution. By this *assumed theory* (for it is nothing else), the Commissioners themselves, with the exception of Mr Twisleton, are so far blinded to the lesson inculcated by many facts contained in their own Report, that they recommend a continuance of the present system, with only some improvements in details. A more liberal measure has, however, been lately introduced into Parliament.

Dr Alison directs his attention, in the first place, to the case of the AGED AND INFIRM POOR. The inadequacy of the present provision for this class, and the necessity of its being very greatly increased, are admitted by the Commissioners. In opposition to their opinion, he urges that the only just and effectual mode of raising the requisite funds is by legal and general assessment.

"In several parts of the Report of the Commissioners," says he, "and in many of the examinations, after full admissions of the sufferings of the poor, it is said that 'their wants have been supplied,' or that 'they are supported' by relatives or neighbours, or others, &c.; and superficial readers might suppose, from such expressions, that all had been done for them that was required, and that nothing has been proved to demand any material change of system. But those who have

studied the subject will not be satisfied with this kind of information ; nor with the assurance, that, even in the most distressed districts, death by mere starvation is rare. Those who are aware of the duty which in every civilized, still more in every Christian country, devolves on the higher ranks of society in regard to the poor, and those who have studied the effects of destitution on the health of communities, on the characters of individuals, or on the prosperity of nations, will always farther ask, what is the *condition*—as to food, clothing, and the comforts, or even necessities of life—of that portion of the population which, in this, as in all countries, is *dependent* on some form or other of charity ; and will always be guided by *comparative* views of these matters, as observed in different countries, or in different parts of the same. If we find, on a fair comparison of this kind, that in certain districts of Great Britain, there is much less of comfort and more of actual misery ; more liability to disease, more temptation to crime, and less capacity of receiving or profiting by religious and moral instruction ; if we find that in those districts ‘ many have perished miserably, whom food, fuel, and clothing, would have saved,’ and that the moral and physical condition of the survivors is much worse than that which is observed among a similar population in other districts, we shall feel entitled to say that the assistance given to that portion of the population is defective. If we find, farther, that such relief as is requisite even for the support of life, is given at the expense of a portion of the higher ranks, instead of being equitably distributed over the whole,—that it is given at the expense of the benevolent members of society, while the selfish are habitually exempted,—and that it is laid as a burden on the industry of the country, while the capital of the country is allowed to escape,—we shall have laid separate and distinct and sufficient grounds for the assertion, that a change of system is required. And if we are farther satisfied, that in those districts where the poor have been most neglected, the progress of the population, in proportion to the demand for labour, has been the most rapid ; and, that where the provision for the poor is most effective, the known tendency of population to press on the means of subsistence has been most beneficially restrained,—then I maintain that we are fully entitled to assert, that the line of public duty and of public interest is clear ; there may be, and probably will long be, room for doubt and discussion, as to the details of the arrangements by which an effective provision for the poor may be best made, and best guarded from abuse ; but of the importance and beneficial tendency of effectual measures, to supply the deficiency of national charity wherever it is

shewn to be deficient, and to equalize the burden wherever it is shewn to be partial, there can be no reasonable doubt.

"I have always asserted, that evidence of all these points is to be found in Scotland; and I think I can establish them all from the evidence which has been taken by the Commissioners. In submitting extracts to to this effect, I beg it may be observed, that I quote, almost exclusively, such evidence as refers to *matter of fact*; considering the *opinions*, even of the most intelligent witnesses, now that so large an induction of facts is in our power, to be of much less importance."—Pp. 9–11.

From the ample amount of evidence quoted by Dr Alison, we select the following specimen, shewing the results of things as they are. It is the testimony of Dr R. K. Greville, a manager of the Edinburgh House of Refuge, and well known as a cultivator of science.

"Is it your conviction that the smallness of the allowance granted to the poor on the roll leads them to maintain themselves by begging and theft?" "I have no doubt whatever that such is the fact."

"Do you think their destitution has a bad effect on their moral habits?" "Not a doubt of it. Within my experience the moral character has become worse, and the general distress far more aggravated. I see, in my intercourse with the poor, that from causes perfectly patent, they are reduced to pawn their clothes, sell their furniture, and turn beggars, and sink into the deepest wretchedness. And I have certainly seen some families who added to this dissipation and depravity, which I conceive to be the almost inevitable consequences of their hopeless wretchedness."—P. 56–7.

Dr Alison adds the remark—"I am aware that some have denied altogether the principle which I have often asserted, that destitution is often a cause of intemperance and immorality; but I have seen and watched the progress of too many cases, in which the sequence of events was as stated in the last sentence by Dr Greville, and in the evidence of Mr Smith of the Calton Jail, Mr Brebner of the Glasgow Jail, and others, to be quoted afterwards, to be in the least staggered by the incredulity of less experienced observers. I have repeatedly seen the reverse process—widows and others, who have become reckless, intemperate, and even dishonest, during extreme poverty, but have recovered themselves completely as they have been gradually 'lifted up by charity,' and especially as by their children's labour they have been enabled to regain comfort and respectability."

At present, the allowances to the aged and infirm poor are almost universally insufficient even to keep them alive;

frequently relief is denied altogether ; and though begging is a punishable offence, there is no means *attainable by the poor* of enforcing even their actual rights. Dr Alison shews that the relief to this class ought to be materially increased, promptly given, and enforceable by some cheap and simple legal process. We concur in his dissent from the opinion of the Commissioners, that the present administrators of the law should be continued as such, with no other check to their powers than that of public opinion, applied by means of a Court of *supervision*, without power of *interference*.

The case of the ABLE-BODIED UNEMPLOYED POOR, considered in Part II., presents greater difficulties than that of the aged and infirm. The Commissioners admit the severe privations to which large bodies of work-people are exposed at seasons of depression in trade and manufactures, and which the inhabitants of the Highlands and Islands are liable to experience from the failure of crops or fisheries. But they strongly recommend that "the poor-law of Scotland, with reference to this important section of it, should remain unchanged," *i. e.*, that those who are destitute only from want of employment, should have no legal right to relief, and that any provision made for them should be made on the voluntary principle only. *And it is for the good of the working-classes, and of the poor themselves*, that they wish the law to remain unchanged. "No portion of society," they say, "has suffered more than the working-classes themselves, from the neglect of the salutary maxim of Christianity, that 'if a man will not work, neither shall he eat.'" Dr Alison's refutation of the theory maintained by the Commissioners is complete :—"So far," says he, "from there being any evidence to this effect, I undertake to shew, from evidence laid before the Commissioners, and *from their own commentaries on that evidence*, that the miseries which they admit to exist in a greater degree among the Scottish poor are counterbalanced by no advantages whatever ; that there is not only 'a more comfortable condition of the labouring and pauper population,' but a more 'healthy social condition,' as regards temperance and sobriety, industry, cleanliness, and comforts, in those classes of the population, in England than in Scotland, *i. e.*, that the ground on which they themselves put their preference of the Scottish system, completely and confessedly fails them."—P. 172.

He shews all this, accordingly, in a very conclusive manner, by means of extracts from the Report, regarding which he justly says,—“These extracts will shew how true is the assertion of the wise man, that ‘the destruction of

the poor is their poverty,'—how naturally vagrancy, ignorance, vice, crime, disease, and excessive mortality, flow from this prolific source of evil; and how irregular and inadequate are the existing provisions in Scotland against it. And I maintain, farther, that they prove what I have always asserted,—that all these sufferings have not only no beneficial effect, but a permanent demoralizing and injurious effect on the population. In fact, the natural change on the human mind, by which it is gradually inured to such sufferings, and enabled to bear up against them, is simply this,—that it becomes careless of every thing but the wants of the passing day, *i.e.*, it becomes essentially reckless and improvident; and, therefore, the regular and effectual relief of such sufferings is not merely a moral duty, but (like the performance of all other moral duties) a political benefit to society."—P. 174.

Dr Alison points out also the influence of destitution from want of employment, in producing vice in females, and crime in both sexes. On this subject, the evidence of Mr Frederic Hill, the intelligent Inspector of Prisons in Scotland, is strong and decided.

Some painful and affecting particulars are given, which prove, "that a large number of persons in Scotland are willing to enter not merely a workhouse, but a prison, and to remain there a long time." About three years ago, when there was much distress in the country, there were nearly fifty voluntary prisoners in the jail at Glasgow; persons undergoing the full discipline of a prison (including, in most cases, individual separation, labour, early rising, and very plain diet), in order to obtain food and shelter. Some of them had been in this position more than a year, when the Prison Board, considering it inconsistent with the state of the law to allow such persons to remain in the jail, ordered them to be dismissed; the consequence of which was, that nearly one-half of their number returned as offenders, and some under serious charges. It appears, from the evidence of the late Mr Brebner, governor of this prison, that, in 1842, there were committed to it 134 males and 124 females, of whom he was satisfied that "it was absolute want, and not inclination, which drove them to commit the crimes of which they were found guilty."

It appears to us, that the increased tendency to crime and immorality which is found among the destitute, arises not merely from the fact that most men will rather steal than starve, but also from the aptitude of every kind of misery to rouse the selfish faculties, and impair the moral sentiments. On this subject we formerly insisted with some earnestness,

in considering "the Laws of Action of Benevolence and Destructiveness" (see vol. x., p. 1); and the following quotations will farther illustrate the principle. "The effect of extreme destitution," says Dr Alison in a former work, "on the general conduct of man, is *brutalising*; it is to deaden, more or less, the sensibility to all feelings of a higher order than the sensual appetites."—(*On the Management of the Poor in Scotland*, p. 117.) "Mr Hume," says Dr Wade, "in one of his essays, alludes to the deteriorating effects of misery on individual character. A prosperous man will be found more accessible to virtuous emotions than one who has been soured by want and disappointment. Every one knows that it is a more favourable moment to ask a favour of a person when full than fasting; after dinner, when the heart has been mellowed by a good repast, than before. Narratives of shipwrecks, the history of the French campaign in Russia, and traits of character in our peninsular wars, testify how the noblest natures may be subdued by the constant pressure of cold, hunger, and fatigue, and rendered callous to every claim save that of self-relief and preservation. The same causes will influence the character of a whole community suffering under the misery produced by a redundant population. It is a struggle for existence, in which moral and social ties are disregarded in the conflict for food, profit, and employment. The debasing effects of want and indigence may be remarked in the different demeanour of the several classes of society. Prudence and forethought are mostly proportioned to the degrees of comfort enjoyed. The lower we descend in the social scale, the greater is the recklessness we find as to future consequences."—(*Wade's History of the Middle and Working Classes*, 2d edit., p. 325.) "Kindness," says Dr Johnson, "must be commonly the exuberance of content: the wretched have no compassion—they can do good only from strong principles of duty."—(*Letter to Mrs Thrale*, April 14, 1781.) "The temper," says W. J. Fox, "gives way, it becomes hard and cold, and even fierce, under the multiplied evils of physical privation."—(*Lecture on the Corn-Law Question, considered in its Moral Bearings*, 1839, p. 10.) The acts of incendiarism which abounded in Suffolk last year, afford an impressive commentary on the principle here laid down. From the evidence collected by a gentleman sent into that county by the proprietors of the *Times*, it appears that the crime prevailed chiefly in consequence of the misery arising from the want or insufficiency of employment, and was hardly known in those districts where the labourers could earn even a bare subsistence. The reporter

says :—" The clergyman of the next village told me,—' The labourers' wives, when I call at their cottages, tell me, ' My husband has been out of work three days or two days this week, and we and the children are almost hungered ; it's hard to bear, God knows, *and it puts bad thoughts into my husband's head.*' " This clergyman told me he had heard these fearful words, ' It puts bad thoughts into my husband's head,' fifty times." To return to Dr Alison's work :—

He urges, with perfect success, that the Christian maxim quoted by the Commissioners, is applicable, not to *all* the able-bodied poor, but only to those who "*will not work ;*" and that nothing more can be deduced from it than this,—that, in giving relief to such persons, " we ought to satisfy ourselves that they *cannot* find work,—we ought to establish a test of destitution, and, wherever it is possible, couple that relief with labour."

Facts are then adduced, fully proving the unsoundness of the opinion that legal relief to the poor must create more of general want than it supplies ; and he justly concludes, not only that a legislative protection against destitution, to able-bodied labourers unable to find employment, is not necessarily destructive, or even injurious, to the moral character of those receiving it, but that it actually elevates and maintains their character, and that nothing is so certainly ruinous to the love of independence and industry, as a long period of abject destitution and despondency. " That the object which the Commissioners seem to have so much at heart, of ' stimulating the industry of the poor,' should be much better accomplished under the operation of an effective provision against destitution, than where they are ' thrown on their own resources,' on the failure of employment, is easily understood by those who have observed, that all the greatest efforts of human industry, in all ranks of society, are made under the exciting and animating influence of *Hope*, not under the depressing and slavish feeling of *Fear*. I formerly quoted the just and profound observation of the late Dr M'Gill—that ' the great error in many speculations on this subject is the notion that the only motive that stimulates the labouring orders to activity, is the fear of want. On the contrary, the love of distinction, the hope of reward, the fear of shame, the sense of duty, the welfare of friends, and neighbours, and relations, are daily stimulating men of the lowest condition (just as decidedly as those of the higher ranks) to active exertions.' But whatever be the general explanation, the *fact* of injury to character, by imperfectly relieved destitution, both as to the adults themselves, and still more as

to their children, is fully ascertained on such a scale as to be a fit ground for legislation.”—(P. 232-3). These remarks are equally sound and valuable.

It is true, as Dr Alison admits, that of this, as of all other charities, there is a certain risk of abuse; but the risk attends equally the voluntary as the legal relief,—equally the aged and infirm poor, who may be, and are, in part, supported by their relations, as that of the able-bodied poor, who may be, and are, in part, supported by their savings. Experience shews that it is to be obviated not by *refusing* relief, in cases of real destitution anywhere, but by *regulating* the relief given everywhere; and, certainly, there is far greater chance of the *discriminating* bestowal of charity under a legal provision than under the voluntary mode which now prevails.

Of the condition of the insane poor we have already published sufficient particulars (vol. xvii., p. 253), and also quoted (p. 316) the recommendation of the Commissioners, that parochial boards should be obliged to send them to asylums.

With respect to the Highlands, Dr Alison is of opinion that, “under proper management, workhouses in some of the larger villages or towns might be safely and beneficially introduced into the Highlands, for the classes of the poor peculiarly adapted to them; but it is obvious that the *labour test* must be the chief safeguard for preventing abuse, when relief is given to the able-bodied poor in such districts. And I cannot doubt that the introduction of work, done by paupers at the public expense, into the country, would be the true stimulus, now wanted, to induce the landlords to set on foot those different improvements, which require, indeed, some outlay and much attention on their parts, but which, according to many witnesses, would furnish a profitable investment for labour in almost all parts of the country.”

We have so much faith in the coincidence of the dictates of well-directed benevolence with sound policy, that we feel confident that the interests and happiness of all classes of society would ultimately be promoted, by the enactment of such a poor-law as experience has shewn to be really beneficial to the poor. That the irresistible power of public opinion will effect the desiderated reform we have an equally strong conviction. “The tendency of the present age,” says Dr Alison, “is undoubtedly towards more charitable views of human nature, and more liberal and humane measures, than were popular with our ancestors; and this change is so consonant with the spirit of Christianity, that I cannot doubt of its being progressive in a nation which stands at present at the head of the Christian world. In legislation and va-

rious departments of human affairs, it is certain that less is trusted to fear, and more to the excitement, and cultivation, and encouragement, of the better and higher feelings of our nature. The great public duty of the education of the people is more generally recognised; and the natural inference is, that we must be prepared to treat all classes of society as men to whom the blessings of education have been imparted; and that it is unwise to treat even the lowest of the species as if they were capable of being influenced only by fear, and that it is safe to trust to the power of more elevated and generous motives. This gradual change has not only been going on, but has been found by experience to be safe and beneficial. We observe this tendency in the present views of mankind as to slavery, and as to colonial policy in general. We observe it in the management of our prisons, and still more in the improvements in our criminal law. When Howard began to propose measures for the physical and moral purification of the inmates of jails, he was met by the very same objections that are now stated to a more liberal and merciful treatment of the poor; that the objects of this 'false and ill-directed philanthropy' were so debased, so improvident, lazy, and intemperate, that all kindness bestowed on them was thrown away, and would only serve as an encouragement to vice and crime in others; but the progress of those improvements has shewn, that the more liberal and charitable view of human nature was the more just. . . . At the present day we see the safety of various ameliorations of the law, which have been made in this spirit. We see that property is not less safe, because we no longer hang thieves and forgers,—that crimes are not less detested, because we do not immure criminals in receptacles of physical and moral infection,—and that Religion is not less respected, because we have ceased to burn heretics. So, also, we may be assured that industry and independence will not be less valued, when we shall cease (as we shall) to believe, that the only security for the maintenance of those virtues among the poor, is to leave them and their children exposed to such sufferings and sorrows, as I have taken upon me to describe and to denounce."—Pp. 300, 302.

It is with poverty as with other evils; to remove it we must remove its *causes*. These, and the means of counter-acting them, are discussed by Mr Combe in his *Moral Philosophy*, Lectures XII. and XIII., where he shews the tendency of a too economical management of the poor to maintain the causes in operation, and even to produce new generations of paupers. Ill-feeding weakens the brain and whole body.

V. *The Duality of the Mind proved by the Structure, Functions, and Diseases of the Brain, and by the Phenomena of Mental Derangement; and shewn to be essential to Moral Responsibility.* By A. L. WIGAN, M.D. London; Longman & Co. 1844. 8vo.

(Second Notice.)

Though hostile to Dr Wigan's theory of the independent and frequently opposite working of the two brains or hemispheres, as a *permanent habitual* mode of action, we have already admitted, that, in certain exceptional cases, the theory seems to us to be the only one capable of accounting for the mental phenomena. But in a subject so obscure, and where demonstrative evidence is hardly to be attained, we are disposed, in treating of the effects of the duality of the brain, to speak rather with the diffidence expressed by Dr Holland and Mr Watson, than in the bold and unhesitating tone of Dr Wigan. The strongest cases in favour of the notion that the two brains *can* act singly, are those of which some examples were given on p. 178 of our last Number; and we now quote the following weaker case, related by Kotzebue of himself, and to which our attention has lately been directed by Dr Wigan:—"In the course of the night," says Kotzebue, "a remarkable circumstance took place, the explanation of which I must leave to my good friends, Doctors Gall and Hufeland. I had fallen asleep; towards twelve o'clock I awoke, and fancied myself on board a ship. I not only felt the rocking motion of the vessel, but heard the flapping of the sails, and the noise and bustle of the crew. As I lay on the floor, I could see no objects through the window, except the sky, and this circumstance added to the force of the illusion. I was sensible it was such, and endeavoured to overcome it. I felt myself, as it were, furnished with two separate minds; the one confirmed what I fancied, the other convinced me that it was all imaginary. I staggered about the room, thought I saw the counsellor, and everything that surrounded me the evening before, remaining absolutely in the same place. I went to the window; I thought the wooden houses in the streets were ships, and in every direction I perceived the open sea. Whither am I going? seemed to say one mind. Nowhere, replied the other; you are still in your own apartment. This singular sensation, which I cannot well describe, continued for half an hour; by degrees it became less powerful, and at length entirely quitted me.

A violent palpitation of the heart, and a quick convulsive pulse succeeded. Yet I was not feverish, nor did I feel any headache. My own opinion and conviction is, that the whole must have been the commencement of a species of insanity."—(*Kotzebue's Autobiography*, ii. 43. London, 1827.)

A person CARRYING ON TWO MENTAL PROCESSES AT THE SAME TIME—as in sewing, and singing or telling a story—is considered by Dr Wigan to perform one of them with one brain, and the other with the other. "One is calling to mind the words and tune of the song, and guiding the numerous organs of the voice in their execution of them, while the other is directing the process of spinning or sewing; but the moment a difficulty occurs, either in the mechanical operation or in the memory of the words, attention is required: the two thinking organs must employ themselves on the same subject, and the two synchronous acts become incompatible till that difficulty is removed."—P. 149. So also a banker's clerk will cast up a column of figures, while conversing or telling an amusing tale; and Dr Wigan, when engaged in medical practice, could not prevent himself from counting his steps, in spite of his utmost endeavours to get rid of this annoyance, by incessant conversation with his companions. But cannot such cases be as well explained by the plurality of organs in each brain, as by supposing independent action in each of the two brains? Why should not the organs of Constructiveness or those of Number be active, while those of Language and other intellectual faculties are independently occupied in their own spheres? Dr Wigan notices an obvious objection to his theory, namely, that in some manufactures and mechanical processes there are a great number of movements performed by the same person at once, which, according to this doctrine, would each of them require a brain to attend to it,—that, if two brains be necessary for two synchronous acts, five brains would be necessary for five concurrent acts, as each would require a separate volition. To this he replies: "(1.) That the acts spoken of are only continuous muscular movements of the greatest simplicity. (2.) That such acts become perfectly automatic, and so far from needing a continuous volition, they do, when once established, really go on spontaneously, and require a distinct act of volition to stop them, or they would continue till fatigue produced pain, when they would equally cease from an act of volition. Every one, I think, must be conscious of this. (3.) That, in the cases where this explanation does not suffice, the combination of several movements requiring intellect is produced by rapid alterna-

tions of thought, but that only two steady continuous movements are possible where each of them requires a continuous exercise of skill and judgment.

"Every instance I have known admits of this interpretation, and I cannot but think that, if the reader will set himself attentively to examine the cases in which numerous concurrent actions take place, he will find that not more than two are really the result of synchronous volition; and that the slightest difficulty or impediment which necessitates consideration, or an exercise of the two brains conjointly, at once reduces them to one single act of the mind. Should his examination not be satisfactory, he will discard this from my list of proofs."—P. 151.

We are much disposed to discard it accordingly. No voluntary act can ever become automatic; a volition, though perhaps so fleeting as to be imperceptible, must still precede it.

Agreeing with Mr Watson (*ante*, ix., 608), but expressing himself more decidedly, Dr Wigan thinks that "THE ACT OF WALKING is, if deliberately considered, an absolute proof of the 'capability of independent action in the two hemispheres.' The right brain has no command over the right leg, nor the left brain over the left leg; whenever the right brain is paralysed, there is no power whatever to move the left limb, yet the left brain moves the right as well as ever—consequently, the brains *are* capable of independent action—the proof is complete. The operation of putting the legs forward alternately was one of the very first things which attracted my notice thirty years ago, when I thoroughly comprehended the structure of the brain—but, to the best of my belief, Mr Hewett Watson is the only writer who has ever drawn any inference whatever from the fact."—P. 410. Yet it does not appear that persons in whom one hemisphere is destroyed are always paralytic on the opposite side. Among the cases quoted by Dr Wigan in chapter vi., is one where the patient, in whom "the whole solid contents of the one-half of the cranium above the tentorium were absolutely gone," was subject only to "epileptic fits, but had no other indication of cerebral disturbance." And a man whose right cerebrum was utterly disorganized, enjoyed, nevertheless, "the use of all the organs of sense," and, it is to be presumed, of locomotion also. Probably the reports of these cases are incomplete; or the cerebellum, medulla oblongata, and neighbouring parts, may have been uninjured—which supposition, however, would hardly explain the continued power of *voluntary* motion on both sides of the body.

Those cases of DREAMING where consciousness exists that

it is only a *dream*, are, in like manner, held by Dr Wigan to be "a complete proof that one brain is, strictly speaking, not asleep, but in a state capable of judging of the reality of the idea passing through the unconscious other."—P. 373. This seems to be the best explanation that can be given; but it is too much to expect that the proof will generally be regarded as "complete."* Again: "There are few individuals accustomed to dream, who have not sometimes, when in that state, held a controversy apparently with another person. Like Dr Johnson, they may have been overpowered by the greater prowess of their imaginary antagonist, and felt mortification at the superior wit of their collocator. Dr Johnson, in relating a dream of this kind, remarks, 'Had I been awake, I should have known that I furnished the wit on both sides.' I consider this process to be the action of two brains separately carrying on their respective trains of thought, and to be a state precisely similar to that of the madman talking to himself, or rather arguing with himself—one of the most common phenomena of insanity. The only difference I can perceive is, that, in the case of the madman, one at least of the trains of thought is diseased, while in the dream each may be rational."—P. 363. Two such dreams are recorded in former volumes of this Journal (x., 620; xi., 75, 332); and a writer in vol. x., p. 729, has quoted from an "Essay on Dreaming," by Mr Andrew Carmichael (in *Tilloch's Phil. Mag.*, liv., 252), what he considers to be a clear and satisfactory explanation of phenomena—adding, at the same time, some ingenious suggestions of his own. Without offering any decided opinion on a matter so difficult, and even supposing the views of Mr Carmichael and the writer who quotes him to be sound, still we cannot help thinking, that, with the aid of the theory of alternate and independent action of the two hemispheres, the explanation becomes more complete.

In treating of APPARITIONS, Dr Wigan, like ourselves, ascribes to the cerebral organs of sight the susceptibility of being thrown, by abnormal causes, into the states which, normally, are preceded by impressions on the external organs—a susceptibility exemplified in madness, intoxication, dreaming, somnambulism, and the delirium of fever. And he argues, "that if both brains be subjected to this pseudal action, we can have no means of judging of the truth of the

* Mr Thomas Forster, in his *Somatopsychonologia* (London, 1823), p. 54, says,—“Some curious facts in dreaming, too numerous to be detailed here, seem to shew that the organs of one hemisphere sometimes become vigilant, while those of the other remain dormant.”

facts,—we are compelled to believe the evidence of our senses ; but if one brain only be subjected to the erroneous action, the other is still capable of entertaining true ideas on the subject, and (perceiving that the evidence afforded is not harmonious) rejects it as a delusion.”—P. 135 ; see also pp. 267, 362. Now, if sometimes it is only one of the brains that sees the apparition (the *possibility* of which we do not call in question), there is, at least, an equal possibility that certain organs of perception *in both brains* are simultaneously affected, while the organs of the reflective and perhaps some of the perceptive faculties remain sound in both, and enable the vision-seer to believe, on proper evidence, that the perceptions are delusive.

IN ABSENCE OF MIND and SOMNAMBULISM, Dr Wigan conceives “ that the intellectual portion alone, of one brain only, is awake, and the remainder in a state of more or less complete temporary abeyance, whether to be called sleep or torpor.”—P. 370. But if each brain is, as he himself expresses it, “ a distinct and perfect whole as an organ of thought,” what is to be gained in the explanation by restricting the wakefulness to *one* ? Is it not more likely that some parts of *both* brains are awake, and others in abeyance ?

Dr Wigan has communicated to us the following case, as a very strong confirmation of his views :—“ A gentleman was driving into town from a distance with a phaeton and pair ; all at once he was greatly alarmed at finding himself in the middle of the Strand, amongst carts, coaches, and omnibuses, having been entirely unconscious of every thing that occurred from the moment he left his own gates ; his ‘ mind ’ (that is his imagination as some one would call it) having been entirely occupied with (I think) the mode of spending money he had acquired by railway speculations, there had not been even a momentary interruption to his agreeable train of thought. Now, he had navigated many intricate passages with dexterity, and certainly the *instinctive* functions of the brain had not guided him. No ! One brain was occupied in driving the horses, and the other in the delightful occupation of spending money—the latter being most vivid, alone produced memory.” So says Dr Wigan ; but we are equally entitled to say that both brains, though employed chiefly in considering how to spend the money, now and then exercised the very slight degree of attention that was necessary for the guidance of a well-trained horse by an experienced driver. It is a gratuitous and most unreasonable assumption, that, of a pair of active brains, only the one whose action

is most vivid produces memory.* Besides, if only one brain was driving, how, on Dr Wigan's own principles, could *both* of the arms lend their assistance in the business?

In the chapter on DOUBLE, or, as Dr Wigan rightly prefers to call it, ALTERNATE CONSCIOUSNESS, a very ingenious attempt is made by him to explain that puzzling phenomenon. "We have examples," says he, "of persons who, from some hitherto unexplained cause, fall suddenly into and remain for a time in a state of existence resembling somnambulism, from which, after many hours, they gradually awake—having no recollection of anything that has occurred in the preceding state—although, during its continuance, they had read, written, and conversed, and done many other acts, implying an exercise, however limited, of the understanding; they sing or play on an instrument, and yet on the cessation of the paroxysm, are quite unconscious of every thing that has taken place. They now pursue their ordinary business and avocations in the usual manner, perhaps for weeks, when suddenly the somnambulist state recurs, during which all that happened in the previous attack comes vividly before them, and they remember it as perfectly as if that disordered state were the regular habitual mode of existence of the individual—the healthy state and its events being now as entirely forgotten, as were the disordered ones during the healthy state. Thus it passes on for many months, or even years. . . . In one form of these attacks the individual becomes a perfect child, is obliged to undertake the labour of learning again to write and read, and passes gradually through all the usual elementary branches of education—makes considerable progress, and finds the task daily becoming more and more easy, but is entirely unconscious of all that had taken place in the state of health—suddenly she is seized with a kind of fit, or with a sleep of preternatural length and intensity, and wakes in full possession of all the acquired knowledge which she had previously possessed, but has no remembrance of what I would call her *child state*, and does not even recognise the persons or things with whom she then became acquainted. She is exactly as she was before the first attack, and as if the disordered state had never formed a portion of her existence. After the lapse of some weeks she is

* It may also be remarked, that Dr Wigan has altogether failed to prove one of the most essential of his propositions; namely, "That, in the healthy brain, one of the cerebra is almost always superior in power to the others, and capable of exercising control over the volitions of its fellow," &c. Of course, all that is built on it is sheer speculation.

again seized as before with intense somnolency, and after a long and deep sleep, wakes up in the *child state*. She has now a perfect recollection of all that previously occurred in that state—resumes her tasks at the point she left off, and continues to make progress as a person would do who was of that age and under those circumstances ; but has once more entirely lost all remembrance of the persons and things connected with her state of health. This alteration recurs many times, and at last becomes the established habit of the individual—like an incurable ague.”—Pp. 391–3. (*Cases of alternate consciousness* may be seen in Mayo's *Physiology*, 4th edition, p. 105 ; Combe's *System of Phrenology*, 5th edition, i. 242 ; ii. 224 ; and Abercrombie *On the Intellectual Powers*, 3d edition, p. 294. A recent case is reported in the *Northern Journal of Medicine* for June 1845.) After some preliminary remarks, Dr Wigan proposes the following explanation :—

“ A. We know by innumerable examples, that a sudden physical shock, or a blow on the head, shall reduce the healthy and acute brain of a profound scholar to a state wherein he has all the mental characteristics of childhood—is pleased or offended by trifles, so apparently insignificant that in his previous state they would not excite the most evanescent attention,—his sensations and perceptions are still perfect, but his reasoning powers are gone.

“ B. In other cases, a similar accident shall obliterate portions or the whole of his acquired knowledge,—he will lose, for example, one language and retain others, or he may lose all ;—and, on his recovery from the physical effect of the accident, he has to begin his life again, and proceed to acquire information in the same mode as a child, though with a much slower progression.

“ C. These effects arise sometimes also from a moral shock, such as the sudden communication of afflicting news—terror—detection in crime, or any other analogous cause, equally or indifferently whether the cause be moral or physical—the brain is either entirely spoiled, temporarily deranged, only slightly injured, or in gradation from one to the other—losing one or more of its functions, and one or more portions of acquired knowledge.

“ D. After such effects have lasted a considerable time, and have or have not been accompanied or followed by any of the usual forms of mental aberration, or of imbecility, the whole powers of the brain may be restored either gradually or in an instant—the watch may resume its motion.

“ All these facts are so familiar to medical men, that for them it is unnecessary to cite cases ; and other readers would find them tedious and difficult to understand ; but if any one wish to examine for himself, he will meet with many such recorded in every work on insanity.

“ 1. If, then, my doctrine of the entire completeness and sufficiency of each brain as an instrument of mind be firmly established, it follows, so plausibly as to be almost certain, that any of the states, A, B, C, and D, and many intermediate modifications of them, may spontaneously occur in one brain, leaving the other entirely unaffected ; we see an example of this in hemiplegia, or paralysis on one side only.

“ 2. One brain may be subjected to one of these changes, and the other

brain may have its powers and functions changed or modified in a different manner.

"3. One brain may be reduced to the state of childhood (state A), and the other remain in its ordinary state.

"4. One brain may be in the state of A or B, and the other may have its functions suspended or modified by a greater or less degree of torpor, as in sleep, catalepsy, ecstasis, &c.

"5. One brain may be in the state of childhood, and the other torpid and unconscious.

"Now, any of the states here described, or any modification of one or more of them may co-exist, or they may alternate. We see phenomena more or less analogous in intermittent insanity, where definite periods of excitement, collapse, and mental health, follow in uninterrupted succession; the examples are numerous.

"Suppose the lady whose case is spoken of as the second form of the malady of *alternate consciousness*, to be placed in the state No. 5 (a modification of that described under letter A.) The only brain she now has at her command is the brain in the *child state*; and, while the other remains in its torpor and *quasi extinct*, she must pursue her education as a child.

"Let us next suppose the child brain to be in its turn seized with torpor, and the other to resume its functions with the use of all its previously acquired knowledge. Here, then, is the second state of the patient satisfactorily explained."—Pp. 394-6.

If these numerous and rather violent suppositions were *demonstrated facts*, we should agree with Dr Wigan in regarding his ideas on this subject as "complete and satisfactory." Meanwhile, however, they can hardly be looked upon otherwise than as a plausible hypothesis, to be thankfully received until somebody shall offer one with superior claims to belief. By Dr Wigan himself, we presume, no higher place than this, in the estimation of men of science, is claimed for it.

In chap. xxi., IMBECILITY and FOLLY are treated of, and held, with truth, to be essentially different from each other. "We see," says the author, "numerous examples of men who are frequently committing acts and uttering sentiments of excessive folly, from vanity and conceit, yet in their sober moments, and after deliberate consideration, can put forth words of wisdom and make shrewd observations, which must have been preceded by a long train of ratiocination. Nay, there are short periods when such persons will converse with an acuteness and a power equal to men of acknowledged sense and discretion. The phrase, first applied I believe to Goldsmith—'inspired idiot'—refers to this peculiar structure of mind.

. . . Folly seems to reside generally in one brain only, and to be perfectly compatible with the possession of another brain of ordinary vigour and perfection. When the weaker brain becomes exhausted by its incessant exercise, perhaps through the day, and by the excitement of events, it will at

night, in silence and solitude, remain passive, while the sounder organ takes a calm review of the follies it has been unable to prevent; a feeling akin to remorse will arise, with strong resolutions of better conduct in future; and if the *then* thoughts be committed to paper, we are surprised how so silly a person can write so sensibly. . . . Imbecility is a different affair; it is an imperfection in both brains, and graduates down to idiocy.”—P. 296. The phrenological explanation of folly is, that, “by the excitement of events” or otherwise, some of the propensities or sentiments (such as Combativeness, Amativeness, or Love of Approbation) are rendered so active and energetic, as to overpower the faculties which ought to regulate them; and that, when their action is exhausted, or when solitude favours its subsidence and allows antagonist faculties to come into play, regret and just views of conduct present themselves. Surely this explanation is infinitely more satisfactory than that of Dr Wigan, who assumes, *1st*, that independent action of the two brains is an ordinary and habitual phenomenon; *2dly*, that all foolish people have one of the brains weaker than the other (the folly of course being greater, the greater the difference of strength of the two); and *3dly*, that “*the weaker brain*” is able to overcome the stronger, which remains in utter subjection to its feeble neighbour until the feebleness of the conqueror is converted into absolute exhaustion!

Dr Wigan intimates, that, should his speculations be accepted as well founded, he has many corollaries to draw, and applications of the theory to work out, in medicine, morals, jurisprudence, and the management of criminals, on which he thinks it would be useless to enter till he knows whether his doctrine be admitted or rejected. If he will only reduce the independent and opposite action of the *two brains* to the rank of a morbid, exceptional, or comparatively rare phenomenon; and substitute for it, in most of the instances where it is employed by him, the independent and opposite action of *pairs of cerebral organs*;—if, for instance, instead of explaining alternations of courage and timidity by supposing that “the two brains” perform opposite functions, and “are in the habit of relieving guard” (p. 338), he will adopt the theory, that the *two co-operating organs* of Combativeness are more active at one time, and the *two co-operating organs* of Cautiousness at another;—any statement of corollaries which he may publish, will, we think, attract the respectful attention of phrenologists. And, as corollaries and applications of the one doctrine must be in a great measure identical with those of the other, we should rejoice were Dr Wigan to give us another opportunity

of meeting him in a field where discussion cannot but be useful, even though probable conclusions are the utmost that we can confidently hope to attain.

It may be remarked, in conclusion, that phreno-mesmerists say they are able to excite singly an organ in one hemisphere, and at the same time a different organ singly in the other hemisphere. A case of this kind was quoted from Dr Elliotson in a former volume of this Journal (vol. xv., p. 373), and additional particulars may be seen in the *Zoist*, No. vi., p. 225, and No. ix., p. 74.

VI. *The American Journal of Insanity.* Edited by the Officers of the New York State Lunatic Asylum, Utica. Nos. I., II., III. Utica, 1844-5. London: Wiley and Putnam.

Dr Brigham is the principal editor of this truly useful and interesting Journal. In the words of the prospectus.

"Its object is to popularize the study of Insanity,—to acquaint the general reader with the nature and varieties of this disease, methods of prevention and cure. We also hope to make it useful and interesting to members of the medical and legal profession, and to all those engaged in the study of the phenomena of mind.

"Mental philosophy, or metaphysics, is but a portion of the physiology of the brain; and the small amount of good accomplished by psychological writers, may perhaps be attributed to the neglect of studying the mind in connection with that material medium which influences, by its varying states of health and disease, all mental operations.

"We regard the human brain as the *chef d'œuvre* or master-piece of creation. There is nothing that should be so carefully guarded through all the periods of life. Upon its proper development, exercise, and cultivation, depend the happiness and highest interests of man. Insanity is but a disease of this organ, and when so regarded, it will often be prevented, and generally cured, by the early adoption of proper methods of treatment."

Dr Brigham's definition of Insanity is inferior to none that we have seen:—"A chronic disease of the brain, producing either derangement of the intellectual faculties, or prolonged change of the feelings, affections, and habits of an individual."—P. 97. He regards the brain as a congeries of organs.

Judging from the Numbers before us, which we have attentively perused, the work is very well fitted to accomplish the ends proposed.

We have copied an article by Dr Davis into this Number, and shall hereafter enrich our pages with some of Dr Brigham's papers. From an article in No. I., we learn that he is decidedly opposed to a plan which has been recommended in England by the Metropolitan Commissioners in Lunacy—that of establishing separate asylums for the curable and incurable insane. He says:—

“ After much consideration, we are constrained to oppose such arrangements. Establishments solely for the poor and incurable we believe would soon become objects of but little interest to any one, and in which neglect, abuse, and all kinds of misrule, would exist, and exist without detection.

“ We are opposed to them principally on these grounds.

“ 1. No one can determine with much accuracy which patients are, and which are not, incurable. Of those in this asylum we cannot say of at least one-third to which of those classes they belong. We still indulge hopes of their restoration, but probably shall be disappointed in a majority of them. But the hope we have, and which encourages us in our efforts to cure them, would be destroyed by sending them to an incurable establishment. The fact that the chances of recovery would be diminished to even but a few, is enough to make us hesitate before we establish such asylums.

“ 2. Many that are incurable are monomaniacs. They are deranged but on one or two subjects, and sane on others. Such surely should not be deprived of any comforts that are afforded the curable class, among which the greatest is *hope* of again being restored to society, which would be destroyed if they were sent to an incurable asylum. Equally or more strongly does this objection apply to cases of remission,—to those numerous cases in which insanity is exhibited for a week, and followed by several weeks of sanity. Shall these be told there is no hope for them?

“ 3. Among the incurable insane there would be no certain means of ascertaining the neglect or abuse of them. In all asylums, the fact that some are well, and soon to leave the asylum, is the greatest safeguard against abuse.

“ 4. No possible good could arise from such distinct asylums, except that they might be conducted at less expense. But how so, if they are to have proper officers, physicians, &c.? And if they do not, why are they better than poor-houses?”

In No. III. we find the following note on the exemption of the Cherokee Indians and Africans from insanity:—“ Dr Lillybridge of Virginia, who was employed by the Government as the Medical Officer to superintend the removal of

the Cherokee Indians, in 1827-8 and 9, and who saw more than twenty thousand Indians, and inquired much about their diseases, informs us he never saw or heard of a case of insanity among them.

"Dr Butler, who has been a devoted Missionary and Physician among the Cherokees for about a quarter of a century, informs us in a recent letter, that he has as yet seen no case of decided insanity among them, though he has occasionally seen them delirious, when sick of other diseases; and adds that an intelligent chief, a man now 80 years old, told him that 'he had never known a case of insanity among his people, such as he had seen in the Hospital at Philadelphia.'

"Insanity is rare, we believe, among the Africans. Cinquez, and other of the *Amistad* Negroes, when in this country a few years since, visited the Retreat for the Insane at Hartford, Ct., and saw many of the patients there. They informed the writer of this article, that insanity was very rare in their native country. Most of them had never seen an instance. Cinquez stated, however, that he had seen one case."

We hope that the ability and judgment displayed by the conductors of this new Journal, and the importance of the subject to which it is devoted, will secure to it permanently the extensive circulation it deserves. Greater attention to correctness of style, on the part of some of the contributors, would render it still more worthy of approbation.

VII. *The Medical Times*, April, May, and June, 1845.

The frontal sinus, and some other craniological subjects, have once more come upon the carpet, in the pages of the *Medical Times*. During the last three months a series of lectures by Dr Knox on Physiological Anatomy has appeared; and, among other matters, the Doctor treats at considerable length of the skull. Overlooking the conclusive evidence which has now been obtained (see *ante*, xv. 220), he doubts whether the form of the cranium can be permanently altered in childhood by pressure; but he is right in saying that the altered shape has not been proved to descend from parent to child (No. 290, p. 22). Of the frontal sinuses he says:—"The facts accumulated by many observers, both anatomists and amateurs, have not, as yet, led to any clear notions of the signification, value, or uses, of these sinuses. To say that they are placed there to lighten the bones of the cranium, might satisfy the readers of the *Bridgewater Treatises*,

but not any sound anatomist. . . This much may be said here; they are not peculiar to any race of men, nor is their development more marked in one race than in another. So far, then, their enlargement beyond the ordinary size seems to be 'individual.' Small, generally, in women, and scarcely existing before fifteen in either sex; hence the beauty of the youthful brow. . . On various sections of different bones, which ought, if possible, to be placed before the student, he will observe that these sinuses are not unfrequently very large; no external appearances would have led him to suspect this; and they are occasionally small, when from outward form he would have guessed the contrary. Their extent then varies exceedingly, nor is it possible, as yet, to reduce this to any physiological principle. One is occasionally much larger than the other, and occasionally one is absent."—(No. 291, p. 33.) He speaks of cases, pretty numerous, and found most frequently, he thinks, in women, of a great increase in thickness of the skull, by a successive deposition, on the inner surface of the vertical portion of the frontal bone, of osseous laminæ, often exceedingly rough, and laid down irregularly. "I have heard it said," he adds, "that this singular appearance is found mostly in women who have had children, and that a layer of bone is laid down during each pregnancy; but it has not been remarked that women became more stupid on this account." We fear that everything that Dr Knox has "heard said" is not to be received as infallibly true. In his 4th Lecture (Nos. 292 and 293), he gives the results of an examination which, in conjunction with Mr Deseret, he has made of "the very excellent collection of crania at present in the rooms of the Phrenological Society," with the view of contributing something to the history of races. A great number of measurements were made, but he found it impossible to draw from them any sound conclusions; and, though the tables have been preserved, only a few are published. We quite agree with him in ascribing very little value to these measurements; for the specimens of each race are seldom so numerous as to allow average results to be obtained. Dr Knox has "sometimes thought that a coarseness of fibre and a looser texture of bone was observable in the dark races: the sutures also appear not so distinctly serrated; they run more in straight lines like harmoniæ, and there is less arching of the squamous suture generally; sometimes it is quite straight." He speaks of only *intellectual* character (exclusively of moral), in connexion with the *size* alone of the skull (exclusively of its shape); so that the vague comparisons which he makes are

absolutely worthless. In Lecture vi. (No. 296), he examines the views of Retzius, Von Tschudi, and Van der Hoeven, respectively, (as stated in an article in the 36th No. of the *British and Foreign Medical Review*,) on the form of the skull of the natives of Northern Europe; on the original inhabitants of Peru; and on the natural history of the Negro race.

Probably in consequence of the appearance of Dr Knox's lectures, our old friend Sir William Hamilton has bethought himself of publishing (as he has done in the *Medical Times*, No. 297, *et seq.*) those "Fictions of Phrenology and Facts of Nature" which, so long ago as 1828, were advertised as speedily to be published. The title of his papers is, "Original Researches on the Frontal Sinuses, with Observations on their Bearings on the Dogmas of Phrenology." He mentions that the notes of which these papers are an abstract "were written above sixteen years ago, and have not since been added to, or even looked at." It is sufficient to refer those who ascribe weight to Sir William Hamilton's statements, to the protracted correspondence between him and Dr Spurzheim and Mr Combe, published in our 4th volume, pp. 1-67. It will be seen, that, in February 1828, a variety of facts there mentioned, and among others those relating to the frontal sinus, having been referred by Sir William and Mr C. to the arbitration of Dr Scott, Professor Syme, and Professor Christison, these gentlemen, after hearing Mr Combe's objections to the skulls brought forward by Sir William as evidence, "agreed that satisfactory facts could not be deduced from them—in the *first* place, because the age and sex could be determined only presumptively, and even that but in a few; and, *secondly*, because liberty could not be obtained to lay the sinuses open to such an extent as appeared necessary for an accurate examination."—P. 34. At a subsequent meeting, "after a desultory conversation on the best method of procuring accurate facts for deciding the points at issue between Sir W. Hamilton and Mr Combe, the arbiters proposed, that, instead of examining skulls whose history was unknown, and which could not always be cut open to the requisite extent, the parties and umpires should attend the pathological dissections at the Infirmary and Fever Hospital; by which means they hoped that, in the course of a few months, a sufficient set of correct observations might be procured, with all the necessary collateral circumstances. This proposition was agreed to; and a few days afterwards, the first examination was made in presence of all the arbiters at the Fever Hospital." Here, however, the investigation was allowed

to drop: and until data, derived from "*a sufficient set of correct observations, with all the necessary collateral circumstances,*" be procured, Sir William's ingenious pleadings, elaborate ridicule, and captivating display of learned names, will be expended in vain. It is highly desirable that such an investigation should be made; and if any cool, candid, industrious, and accurate observer shall thus succeed in proving any statements made by phrenological writers respecting the frontal sinus to be erroneous, we shall cordially welcome the correction. Truth, not victory, is what we desire; and if, in our progress towards it, the dicta of Gall, or Spurzheim, or any other phrenologist, should be overturned, there would be no reasonable ground for either pain or astonishment in the discovery that phrenologists, like other men, had fallen into error. That in all cases much beyond puberty, the frontal sinus throws a serious difficulty in the way of phrenological observations in the superciliary region of the head, is universally allowed; the difference between the phrenologists and Sir William Hamilton respects chiefly the extent of the obstacle. And here we would caution his readers not to receive too confidently as phrenological doctrine what he presents as such—for example, "the singular fancy" which he is pleased to ascribe to them, "that these cavities are abnormal varieties, the product of old age and disease."

III. INTELLIGENCE, &c.

Obituary.—We have learned, with deep regret, that Dr HIRSCHFELD of Bremen, one of the editors of the *Zeitschrift für Phrenologie*, died of typhus fever on the 22d of March. We immediately wrote to Germany, soliciting materials for a biographical notice of him, but have not yet obtained them. Meantime, we learn that Mr Von Struve will continue to publish the *Zeitschrift*, notwithstanding this heavy loss to the cause of Phrenology in Germany.

Another death which we grieve to record, is that of the Rev. DAVID WELSH, D.D., author of the *Life of Dr Thomas Brown*, and one of the four original members of the Phrenological Society—the institution of which, indeed, on 22d February 1820, was suggested by him. While resident in Edinburgh, he supported the Society with great zeal and talent; but towards the close of its first year, his appointment as minister of the parish of Crossmichael, in the stewartry of Kirkcudbright, deprived the other members of the benefit of his co-operation. In 1825 he produced the *Life of Dr Brown*, in which an excellent summary is given of the philosophical system of his distinguished friend, and the relation in which it stands to Phrenology is explained. (See *ante*, vol. ii. p. 317). Two years afterwards he was translated to the parish of St David's, Glasgow, the duties of which charge he continued to perform till 1831, when the Professorship of Church History in the University of Edinburgh was conferred on him. In 1843 he occupied the prominent position of Moderator of the General Assembly of the Church of Scotland, and, being an adherent of the party

which then seceded from the Establishment, had the honour of heading the procession of ministers and elders who, on 17th May in that year, left the place of meeting, and constituted themselves into a Free Assembly in another part of the city. Subsequently, Dr Welsh, though of a retiring disposition, and distinguished by caution and moderation of character, took an active part in the affairs of the Free Church. Having resigned his Professorship in the University, he was appointed to the Chair of Divinity and Church History in the College of the new ecclesiastical body. He was also engaged as editor of the *North British Review*, a quarterly literary and scientific journal, which, though established, and, it is understood, chiefly supported, by members of the Free Church, has been conducted in so catholic and scholarly a spirit as to have attracted the esteem of enlightened men of every sect. Five Numbers of this work have appeared. Only a few of the articles in it are understood to be productions of his own pen.

For many years Dr Welsh laboured under an affection of the heart, which made it difficult and painful for him to preach to a large congregation; and by the labour and anxiety which he necessarily encountered during the stormy ecclesiastical period to which we have referred, the disease was aggravated to an extent which visibly affected his appearance, and excited the anxiety of his friends. For some weeks before his death he endured much pain; but till the 24th of April, when he suddenly expired at the age of 51, he seemed to entertain no apprehension of so speedy a termination of his life. His valuable library has been purchased for the College of the Free Church.

Dr Welsh was a man of acute though not brilliant understanding, great good nature, pleasant social qualities, extensive reading, and, as a clergyman, rare freedom from bigotry and fanaticism. At Crossmichael he became the centre of a small circle of phrenologists, some of whom, we believe, still reside in the district, and continue to take an interest in our science. At a dinner given in Edinburgh by the Phrenological Society to Dr Spurzheim on 25th January 1828, the health of Dr Welsh and the other founders of the Society having been proposed by the honoured guest, Dr W., in responding to the toast, took occasion to acknowledge, in strong terms, "the pleasure and benefit which Phrenology had afforded him in his own speculations, and the unspeakable advantages he had derived from it in his professional capacity:" it had increased, he said, his confidence in the truth of Christianity, and been of inestimable benefit to him in dealing with his people in the ordinary duties of his calling. (See vol. v., p. 110). In December 1829 he was elected President of the Society—an office to which, as is usual, he was re-elected the following year. Being then resident in Glasgow, however, he of course took no active part in the Society's proceedings. We conclude this brief notice by mentioning that the articles *JESUS* and *JEWS*, in the last edition of the *Encyclopædia Britannica*, were contributed by Dr Welsh.

London Phrenological Society.—(Abridged from the *Zoist*, No. VIII.)—*April 17. 1844.*—Dr Elliotson exhibited a cast of the head of John Lawrence, 21 years of age, lately executed for the murder of a police-officer, by whom he had just been apprehended on a charge of robbery. The act appeared to be the result of a sudden impulse; and he declared on the scaffold that he had no enmity against the deceased, and was not conscious of what he was doing when he struck him. "The cast presented a fair average development of the intellectual and moral regions. It was not the cast of the head of a being low in the human scale, with little intellect and ideality and moral feeling. But the sides at Cove-

iveness, or Love of Property, and at Destructiveness, or the disposition to violence, especially at the latter, were very large. A brain so organized, must have been subject to fierce outbreaks of rage. Had this man been trained by a sound education, not by such as generally passes under that name, and been taught to abstain from fermented and distilled fluids, and had the regulations of society been such that every honestly-disposed person could gain a livelihood, or had he been placed in different circumstances, he might have been free from crime, and respectable. If capital punishment is ever justifiable, it certainly is not in a case of sudden phrenzy, without premeditation or personal feeling; and though society has a right to security from every one who has thus acted, the destruction of life under such circumstances seems wrong." Mr Symes then read phrenological inferences from a cast of the head of a boy, whose character had previously been written and sealed up by his father: the sealed communication, on being opened by the president, was found to correspond.

May 1.—Mr Symes exhibited a skull, said to have been that of an "old miser." The only remarkable points about it were, that while every other portion was particularly thick and dense, the inferior lateral region, and especially at the organ of Love of Property, was remarkably thin and translucent. He afterwards read some strictures on an article by Dr Prichard (copied into the *Phrenological Journal*, xvii., 168), where it is maintained that "the principal and fundamental cause of insanity is, in many instances, to be sought, not in the brain, but in some other region of the body." [If the report in the *Zoist* is correct, Mr Symes erroneously attributed to Dr Prichard the opinion that "effects produced upon the sensorium and the mind through the medium of the stomach, or any of the viscera of physical life, are not less immediately brought about by the action of the material organism on the intellectual or sensitive power, than the impressions produced in the mind by a blow on the head, or by any powerful agency exerted immediately on the brain." Dr P. merely gives this as the opinion of Jacobi, and expressly says that he himself refrains from discussing the question whether there always intervenes a morbid condition of the brain.] Mr Symes argued against the opinion of Dr P. that the case related by him was an example of "insanity mainly dependent on a diseased state of organs very remote from the brain;"—and maintained that disordered intellect is, in truth, an affection of the brain; that, in the great majority of cases of long standing insanity, we do find very palpable evidences of disease of the brain; and that if, in some instances, there are no evidences of morbid change so gross as to be appreciable to our unassisted senses, with our present knowledge and our present means of investigation, that is only what occurs in functional derangement of other organs, and should only stimulate us to improve our means of investigation. Mr Symes also made some remarks in opposition to the hypothesis incidentally introduced by Dr Prichard, of the existence of mind as a separate something independently of matter: Mr Symes arguing, that we have no more right to assume such a position to account for the phenomena of life and thought in man, than in brutes; and as regards certain phenomena of automatic life, than for analogous phenomena in the vegetable kingdom.

May 15.—Dr Elliotson made some observations, with the purpose of shewing that William Crouch, who had been convicted of the murder of his wife in Marylebone Lane, ought, on account of cerebral injury, not to be hanged. The criminal was fond of his wife, and had no reason for committing the act. It was proved at the trial, that having been thrown from a horse, with his right temple against a stone wall, he was ren-

dered perfectly senseless for several days, and subsequently was quite a changed man—very dull, and so apt to laugh and talk strangely, that his conduct gained him the name of the “half-cracked man.” A second severe injury in the temple was afterwards caused by a fall from a ladder. He had been drinking on the day of the murder, but, so far as the evidence shewed, only to the extent of a pint of beer. Baron Alderson, in summing up the evidence, desired the jury to consider whether it had been proved that the prisoner committed the act with which he was charged, whilst under the influence of excitement produced by disease of his brain, and not voluntarily by drinking. In the opinion of Dr Elliotson, the diseased condition of the man’s brain prevented him from possessing, or putting into practice, the wisdom of abstinence so necessary to his welfare, and his drinking was as venial as the murder. “Instead of hanging this unfortunate fellow-creature, the Government should have him treated for chronic inflammation of his brain. He should be kept in repose and upon low diet, and leeches and other anti-inflammatory measures be steadily employed, according to circumstances, till he is well: and then he should always be more or less looked after, because the morbid excitability once induced in the brain by a mechanical injury often lasts in some degree or other through life. I have known mischief take place at the very spot of an injury above thirty years after the accident. Persons, after an injury of the head, are seldom perfectly safe afterwards, unless they become rigid water-drinkers.” Dr Elliotson next communicated to the Society a case which had just occurred in the practice of Dr Engledue. A boy 12 years old had received a blow on the temple from a cricket-ball on 5th April, but no medical advice was requested till three weeks later, when his mother brought him to Dr Engledue. For several days after the injury he had remained dull, stupid, and averse to exertion, and even play. Formerly kind, affectionate, obedient, and civil in speech, he now was spiteful, revengeful, mischievous, reckless, quarrelsome, disobedient, impertinent, and addicted to swearing and bad language. He was detected in an attempt to fire a quantity of chips in the cellar of his father’s house, and moreover had attempted to hang himself. He complained of no pain in his head to Dr Engledue, and stated that he was quite well. He answered the Doctor’s questions with the greatest composure and intelligence; but the moment he returned to his own house, and was left uncontrolled, his actions became violent in the extreme. “The only difference,” said Dr Elliotson, “between these cases is, that Crouch has committed murder; the boy has not yet committed murder: that Crouch after leaving the hospital was abandoned to his own guidance; and the boy, because a child, has been placed by his mother under able medical care, and probably will be saved from crime and cruelty.” It is added in a note, that, while Crouch has been hanged, the boy has gradually improved under Dr Engledue’s treatment.

Sheffield.—The following are extracts from a Report read before the Members of the Sheffield Phrenological Society, at the third annual meeting, held in the Assembly Rooms, April 17th, 1845; Corden Thompson, Esq., M.D., President, in the chair.

Since the time of its introduction here, the believers of Phrenology, both in this and in other places, have gradually increased in numbers and in influence; its doctrines are treated with a respect more compatible with their worth; and even its language is beginning to be used, both in the senate, the pulpit, and the rostrum, not in derision, but as the best possible means of conveying an idea from one man to another. At no time did the Sheffield Society stand on a higher position; at none

did its lists enrol a greater number of *bona fide* members; and at none has it been favoured with the co-operation of gentlemen of more extended influence, or of more distinguished merit. Under such circumstances as these, then, it becomes a pleasure, rather than a duty, for your Council to lay before you a Report of their proceedings during the past year.

During the past six months, lectures and papers have been read before the members, their friends, and the public, to the number of 26; of which 23 were public lectures, and 3 papers, read to the members only. The Society has a rule which stipulates for *six* public lectures *only*, during each session; in the instance before us, we have 17 additional. The following is a list of the lectures and papers referred to:—1. Two lectures from our respected President, Corden Thompson, Esq. M.D., on “the Fundamental Principles of Phrenology.” 2. A course of twelve *Conversaciones* on “Mesmerism and Phreno-Mesmerism, and their Physiological Phenomena,” by Mr Thomas Adair. 3. Seven talented lectures from E. T. Craig, Esq., of York, on the following subjects, viz. :—One on “Phrenology, applied to Education;” two on “Phrenology, applied to Education and Legislation;” and four on “Phrenology, with Mesmeric Illustrations.” 4. A course of two lectures, by David M’Taggart, Esq., of Halifax; one on “Man, Phrenologically and Metaphysically considered;” and one on “The State of Adam and Eve in Paradise.” 5. A paper, read by Mr Henry Turner, on “The Combination of Organs necessary for various Trades and Professions.” 6. A paper, read by Mr W. T. Knowles, on “The Fundamental Principles of Morality.” 7. A lecture, read by Samuel Eadon, Esq., M.A., on “The Nature of Conscience; or an Investigation into the Ascendant Moral Principle in Man.” The books of the Society at present contain 86 members, including 4 honorary members. At the close of the Session of 1843-4, we numbered only 71, shewing an increase of 15 during the past year. We have the satisfaction, also, of stating, that notwithstanding the heavy expenses of last Session, the ledger still shews a balance in our favour. Through the kind assistance of one of the members, the Council has also been enabled to purchase its present collection of busts and casts.

The Council, having also long been impressed with the growing necessity of adopting some means for rescuing the advocacy of phrenological science from the hands of travelling charlatans, has, during the past year, had a number of beautifully arranged diplomas struck off, and one, properly signed and sealed by the Officers and Council, sent to each of the Society’s Honorary Members. The end to be gained by this proceeding is, that by the example of the Sheffield Society being followed throughout the kingdom, such a system may be adopted, as to make it certain, that every public teacher of Phrenology, of *known merit*, connected in this manner with any Society, may have something more to shew than the mercenary quack, in proof of his abilities for the task he has undertaken; that thus the public may have some test by which to distinguish the authorized from the unauthorized; and that science may be spared the contempt which such *friends* as the latter are sure to bring upon it. During the progress of the Session, the attendance of the members at the lectures and papers has been on the whole good, and their responses to the demands of the Council prompt and satisfactory.

The officers for the ensuing year are, *President*, Corden Thompson, Esq., M.D.; *Vice-President*, G. C. Holland, Esq., M.D.; *Honorary Secretary*, Mr Charles Wardlow; *Financial Secretary*, Mr Shuttleworth; *Treasurer*, Mr Henry Aitken; *Council*, Alfred Wynn; W. C. Corsan;

Jehoida Rhodes; Robert Roper; F. Scott; J. Ellis; J. Derby; T. Adair; H. Turner; H. Mabson; R. C. Smith; J. S. Taylor.

Manchester.—Extract from last Report of the Directors of the Mechanics' Institution :—" The Phrenological Gallery has been an important feature in connection with the present Exhibition, Mr Bally having been actively engaged daily during the entire term, in furnishing phrenological registers to a numerous class of visitors. The greatest satisfaction has prevailed with respect to Mr Bally's labours, and though he has on many occasions been wearied with the number of applicants desirous to submit to his manipulations, and thus been subject to the chances of error, the general results of his phrenological estimates attest, by their accuracy, his practical acquaintance with a science to which he has uniformly manifested the greatest devotion. We have computed, by referring to the receipts from this source, that no fewer than *two thousand two hundred* persons have availed themselves of this opportunity of having their cerebral developments determined. To some it has doubtless been a mere matter of idle speculation or amusement, while others have seized the opportunity to test the science, and profit by its revelations."

Lectures on Phrenology.—During March, Mr C. Donovan delivered seven lectures for the *Dublin Mechanics' Institution*; and in May, nine lectures for the Philosophical Society, *Limerick*. In Dublin, he gave fourteen lessons on manipulation of heads, to a class of members of the Mechanics' Institution. In this class, we learn, there were a barrister and a medical man, the rest being persons engaged in business. In the *Dublin Freeman's Journal* of 1st May, there is published an address unanimously adopted by the class at a meeting held on 25th April, and subscribed by the Chairman on their behalf. It expresses high satisfaction with their teacher, and declares that so far as their inquiries have led them, they see every reason to believe in the truth and importance of Phrenology. They have also formed themselves into a Phrenological Society. At Limerick, Mr D. gave twelve lessons on manipulating, to a class of members of the Philosophical Institution. At a meeting held in the Society House on 9th June, a complimentary address was proposed by Dr Gore, seconded by Dr Gelston, and unanimously presented to Mr Donovan. It expresses approbation of his lectures and mode of manipulating the head, and a conviction that his public and private teaching is "eminently calculated to extend the usefulness of Phrenology as a science of application, to stimulate inquiry, and place before the public mind the immense benefits which a right understanding of the subject is calculated to confer upon society at large." The address is signed on behalf of the meeting by James Joseph Fisher, Chairman, and George Westropp and William Lee, Secretaries. Mr Donovan is now delivering lectures in Cork.—Mr E. T. Craig has lately been lecturing on Phrenology in *Bolton*, and Mr Adair on Phreno-Mesmerism in *Oldham*. Both appear to have been well attended.—During April, Mr D. G. Goyder delivered in *Alloa*, under the auspices of the Phrenological Society of that town, a course of six lectures on the application of Phrenology in the domestic and social relations. The average attendance was about 150.

Die Allgemeine Zeitung, or Augsburg Universal Gazette, on Phrenology.—This is in rank the first continental newspaper; it devotes a separate department in its columns to scientific subjects, and has lately declared itself a decided enemy to Phrenology. About two years ago an article was sent to its editor, by one of his regular correspondents in this country, giving an outline of the fundamental doctrine of Phrenology,

and a sketch of the progress of this science in Great Britain. The article was not inserted, although the editor of the *Gazette* had, on a previous occasion, stated that he was quite unbiassed as to Phrenology, and willing to allow himself to be informed on the subject. For more than a year the *Gazette* was altogether silent on Phrenology, if we except two or three occasional remarks on phrenological proceedings taking place at the time in Germany, as, for example, Mr Combe's lectures on Phrenology at Heidelberg. In the course of last summer, however, the *Gazette* came fully out on the subject. There was a series of so-called "phrenological letters" inserted in several numbers of the paper, professing to expose the "quackery of Phrenology." In the appendix to No. 345 (10th December 1844), another attack is directed against Phrenology, in an article entitled "Phrenology and Cranioscopy." This production is altogether unworthy of the character of so eminent a newspaper, whether we regard the tone in which it is written, or consider the argumentative powers of the author. The attack is based upon an article in the first part of the "*Königsberger Transactions in the departments of the Natural Sciences*" (*Königsberger naturwissenschaftliche Unterhaltungen*), which is written by Professor Burdach, the well-known physiologist, and is evidently intended as a set-off in favour of Dr Carus's "Cranioscopy." The latter production has already been sufficiently noticed in our pages, as well as in the *British and Foreign Medical Review* and the *German Phrenological Journal*, to require any further notice here. After having heaped all the ridicule and abuse on Phrenology which the writer in the *Augsburg Gazette* seems capable of bestowing, he with the greatest naïveté continues thus:—"An outline of Carus's doctrine, called by him Cranioscopy, can be given in a few words. There are three principal divisions to be distinguished in the activity of the human soul (*sic!*), which, to use a general expression, may be termed the intellect, sentiment, and will. They are represented by three different regions of the brain, with which as many portions of the skull correspond," &c., &c. Leaving out of sight the inaccuracy of certain expressions, what is this but Phrenology?—for the fundamental doctrine of Phrenology, as every one knows, is the existence of a plurality of organs of the mind, "represented by different parts of the brain, with which the forms of the outward covering of the brain, that is, the skull, generally corresponds." After the author has said a few words more, he adds, amusingly enough, in speaking of this Cranioscopy *against* Phrenology, while using the same definitions as those given by phrenologists, "Here we feel at once, that we are on scientific ground." Thanks to you, Mr Reviewer, for your frank and candid avowal! But what are you writing about? Really the editor of the *Augsburg Gazette* should take care to whom he commits the charge of attacking Phrenology, lest he chance to fall in with some wag, who, preaching Phrenology, is professing to put down such "unscientific" "follies."

We have done with the article in question, but wish that the Germans could be made aware that such communications on Phrenology as are at present to be found in the *Augsburg Gazette*, and other German newspapers and periodicals, are altogether undeserving of their attention. These communications are exactly the counterparts of the objections to Phrenology which were published in this country twenty years ago, and which long have sunk into total and deserved oblivion. They do not represent Phrenology fairly, and the objections which they state have been a hundred times answered in this country, till the public has become tired of listening to their repetition. It is on this account, that we refrain from entering into any detailed notice of the article alluded to.

Since the above remarks were written, we have observed in the *Augsburg Gazette* of 31st December, a short but tame reply, by a correspondent, to the article in question. It is evidently inserted to preserve the boasted character of the paper for impartiality.

Edinburgh University—Students' Prize for 1844-5.—The Students' Prize Committee have announced that they have obtained from Professors in the Faculty of Medicine the following as the subject of the prize-essay for medical students—"On the intellectual faculties of the lower animals; together with an inquiry into the evidence derived from comparative anatomy of the localization of the mental faculties in particular parts of the brain." The essay is to be given in on or before 15th November 1845. Competition is open to those students who have attended classes in the medical faculty during session 1844-5.

Mr S. Solly on the Protective Apparatus of the Brain and Spinal Cord in Men and Animals.—Royal Institution, April 4, 1845; Sir E. Codrington, G.C.B., V.P., in the chair. Mr Solly commenced by asserting the ganglionic character of the spinal cord as well as of the brain, a fact evidenced in the structure of the spine of the fish *Trigla lyra*. To the cerebral ganglia he referred all acts of intelligence; to the ganglia of the spinal cord and of the sympathetic nerves, all the acts which preserve and maintain life. The lecturer pointed out the necessity for an important organ like the brain being protected from external violence, and adverted to the wise provision of Nature in enclosing it in a rounded osseous cavity, so that on every side it presented in its form the mechanical advantages of the arch. The structure of the external table was fibrous, and well fitted to resist sudden shocks. In the cavity of the skull the different parts of a soft organ like the brain were in some measure insulated, and prevented from pressing unduly on each other, by the processes of the dura mater, the falx major, falx minor, and tentorium. With this mechanical disposition, the head might be moved about freely, and even sustain some violence, without having its structure deranged. In the young the bones of the skull are highly elastic; they readily yield to shocks; and a blow which would have the effect of stunning an adult passes off unheeded by a child. Another point to be considered, was the means taken to prevent the effect of undue excitement in the circulation of blood through the brain. This organ, it is well known, is abundantly supplied with blood by means of the carotid and vertebral arteries. The carotid arteries take a very tortuous course through a bony canal, and thus, under great excitement, the too rapid supply of blood is impeded,—a fact made evident by the violent pulsations of the vessels on the outside of the head and neck. In the cat tribe, the internal carotids divide into numerous branches about the sella turcica, forming a network or diverticulum of vessels, called rete mirabile. These afterwards unite and form a trunk, which then divides again, and is distributed through the brain. This kind of arterial reservoir prevents any surplus blood from being thrown too rapidly on the brain under violent muscular exertion, as when these animals spring on their prey or throw themselves from a great height. Some remarks were made on the mechanical form of the spine, its curved shape being so adjusted as to allow it to receive or resist shocks like a doubly-bent spring. The bony protection for the spinal marrow and nerves, and the manner in which great flexibility and freedom of motion are combined with great strength in this part of the skeleton, were also pointed out. The lecture was illustrated by a number of well-executed drawings.

Museum of Skulls at St Petersburg.—A museum has been opened at St Petersburg for the special reception and arrangement of the skulls of all the various races of men who have inhabited the vast empire of Russia. Already the collection contains 122 specimens—five of which were found, in January last, in the neighbourhood of Novogorod, at a great depth below the surface of the soil, and in their conformation resemble neither those of the actual inhabitants, nor of the Finnish or German races, which formerly occupied the centre of European Russia, conjointly with the Slavonic population. The Russian naturalists believe these skulls to have belonged to an Asiatic race, which had immigrated to Russia in Europe, and then become extinct,—as in Siberia the once numerous race of the Kergasses, of Mongolian origin, is gradually perishing.—*Athenæum*, March 22, 1845.

French Academy of Medicine.—On 1st April 1845, was read a paper *On the Localization of the Faculty of Speech in the anterior Lobes of the Brain*, by Dr Belhomme (one of the candidates for the vacant place in the Section of Anatomy and Physiology). The conclusions of the author are, 1. That lesions of the faculty of speech depend either on a cerebral affection, or on some derangement of the organs of communication between the brain and those which serve the purpose of articulation; 2. That sudden loss of speech depends on hæmorrhage, or some other lesion of one, and especially of the two anterior cerebral lobes; 3. That care must be taken not to confound the convulsive and paralytic phenomena which pervert the faculty of speech with sudden loss of remembrance of words, and subsequent difficulty of utterance; 4. That in the disturbance of the anterior lobes of the cerebrum, the act of speaking is suddenly rendered impossible, and it is only when a cicatrix is formed in the brain, that the organ regains more or less of its normal functions.

On 8th April, was read *Considerations on Mental Alienation in a psychological point of view*, by F. Dubois d'Amiens, D.M.—According to the author, the study of mental alienation cannot, without inconvenience, be separated from psychology. It is by a perfect knowledge of the faculties of the mind, that the nature and causes of dementia can be elucidated. It is for this reason that Maine du Biran, at the demand of Royer Collard, instituted a course of study of mental diseases founded on psychology; dementia is but a long dream, in which the divine principle, the *moi*, deprived of its power and free will, can neither escape nor overcome the false perceptions. All the intellectual lesions indicate the existence of an organic affection of the central nervous mass, which may or may not be appreciable, but which must be admitted in order to avoid being bewildered by a host of hypotheses.—Dr Rochoux, after stating that he coincided with the author of the memoir on the last opinion emitted, continues thus: “When I heard the famous *moi* announced, I expected it to be clearly and evidently demonstrated. Vain hope! Moreover Maine du Biran, quoted by Dr Dubois, was not more fortunate. As to Royer Collard, his favourite argument to prove the existence of a spiritual principle was: ‘All takes place in the organism except the will.’ Now, if the will is a proof of a spiritual principle, is there a creature so highly endowed as the ass? As to the anathema pronounced against the principles of sensualists and this conclusion, ‘All the varieties of mental alienation are dependent on an organic lesion,’ I cannot see on what grounds it can be founded.”—Dr F. Dubois, in reply, said that the contradiction was more apparent than real, and that he was a sensualist, inasmuch as he considered the senses necessary for the perception of surrounding objects.—Dr Virey did not consider it possible to explain partial delirium by organic lesions.—Dr F. Dubois said, that partial deli-

rium is not very common ; for, on examining the patient attentively, the intellect is found more seriously affected. But it may be asked, where is the lesion in these cases ? This it is impossible to answer ; but, by *post-mortem* examinations, this question will at length be elucidated.—Dr Ferrus : “ I consider dementia to be always dependent on an organic lesion, and am of the same opinion with respect to cases in which the intellect is obtuse, since every functional supposes the existence of an organic lesion. The functions of the brain are : feeling, perception, judgment—in short, intelligence. Now, when one or more of the intellectual faculties are changed—perverted—we must necessarily conclude that an organic lesion exists. The domain of pathology is the organism, and the philosophy of medicine is founded on the observation of facts, independent of the primary cause ; it is by the functional disturbance that we study diseases, and is by this that we act on the individual by what we call moral treatment, and that we employ the remedies which are considered as modifying diseased organs. As to the opinion that the soul sleeps in idiots, I consider it quite erroneous, since the idiot sees, walks, hears with difficulty ; and, indeed, in confirmed idiocy, the patient would die of hunger if he were not fed.—Dr Castel thought that alienation might be produced by a moral as well as a physical cause.—Professor Gerdy considered it highly important not to confound faculty and function.—After some further remarks from Dr Rochoux, Ferrus, and Dubois d’Amiens, the discussion was closed.—*Medical Times*, April 19, and May 3, 1845.

Reformation of Criminals.—Prince Esterhazy has established at Vienna a society for the reception and reformation of convicts of both sexes, after their liberation from prison. It is the first institution of this kind organized in Germany, and more than two thousand of the Austrian nobility have subscribed towards its formation. Until persons dismissed from prisons be enabled to procure an honest subsistence when willing to do so, it is unreasonable to expect that they will refrain from new crimes.

Head of Hocker.—TO THE EDITOR.—SIR,—*Douglas Jerrold’s Shilling Magazine* for May, in an article “ Impressions of a late Trial for Murder,” contains the following *new* refutation of Phrenology. “ The shape of his head completely contradicts the theory of phrenologists. The DESTRUCTIVE PASSIONS, they say, reside in the BACK OF THE HEAD ; but *Hocker’s* skull (for it was that celebrated criminal who was on his trial) was particularly narrow in that part, the distance between the back of each ear being small. His COUNTERTENANCE EXPRESSED NO EMOTION WHATEVER ; neither did it shew *firmness* ; it was INDIFFERENCE !—of all others the expression *least to be expected from a man in his situation*. In short, he *looked as much UNLIKE a murderer*, or a human being awaiting the issue of his own life or death, as *the most listless auditor in court*. It were impossible to have a better *miniature* portrait of Secretiveness than the foregoing statement, that there was “ no emotion whatever ” in the “ countenance.” Though the writer asserts Hocker “ looked unlike a murderer,” he, all unconsciously to himself, most minutely and exactly identifies the resemblance of Hocker’s with other criminal crania, in describing the natural language of his Secretiveness,—a faculty more impulsive to “ the destructive passions,” perhaps, than any other ; though its organs—alas ! for this second Zoilus—do not lie at “ the back of the head.” Reports of the trials of Thurtell, Greenacre, and Courvoisier, tell also of their “ indifference”—a manifestation so common to inferior organizations, that a phrenologist, reversing Mr Jerrold’s superlative,

might truthfully term it "an expression *most* to be expected from a man in their situation." The best reply to all such summary arraignments of nature's laws, is to examine the cast taken from the head of the individual. But that evidence can be accessible only to those with capacity to ascertain it. The miscellaneous "reading public" can be freed from or abandoned to error only by those cerebral physiologists possessing the utterance of the press.—I am, &c., J. M.—LONDON, 5th May 1845.

Alleged Misrepresentation of Dr Spurzheim.—In a notice which Mr Priedeaux has taken of my second contribution on the organ of Language, he conceives that I have misrepresented the opinions of Dr Spurzheim. In Dr Spurzheim's assertion that the Greek and French languages have a greater number of tenses than the German and English, Mr Priedeaux says the Doctor refers "to the circumstance that the two former languages recognise and discriminate by different modes of expression, e. g. in their two past tenses *ἔγραψα*, *ἔγραψα*, and *frappois*, *frappai*, shades of distinction in time (which are) lost sight of and confused together by the latter under the single words *schlug* and *struck*."—No. 83, p. 192.

The selected illustration is unfortunate, for the distinctions of time which the Greeks expressed by the words *ἔγραψα* and *ἔγραψα*, are accurately expressed by the English equivalents *was striking* and *struck*. It must be remembered, that, 1st, The English Greek grammars give English equivalents to ALL the Greek tenses; 2d, Those equivalents are current phrases in our language; and, 3d, Translators of Greek books adopt those phrases in their translations. And hence the assertion of Dr Spurzheim, that the Greek language has more tenses than the English, is erroneous. The English appreciate and express every nice distinction of time which was appreciated and expressed by the Greeks. It will be found, on reference to the German Greek grammar, that there are German equivalents to all the Greek tenses; and those equivalents are current in German literature.

RICHARD CULL.

Dr Charles Radclyffe Hall on Mesmerism.—The *Lancet* of 3d May contains the last of Dr Hall's papers on "the Rise, Progress, and Mysteries of Mesmerism." They are clearly, vigorously, and, on the whole, we incline to think, candidly written: though some injustice is done to Mesmerism and Mesmero-Phrenology in quoting too indiscriminately, as mesmeric doctrine, the fanciful notions of individuals; and we observe that the *Zoist* accuses him, but in general terms, of misrepresenting facts. He makes it evident, however, that as yet no approach has been made to the discovery of general laws; the recorded phenomena being diverse and inconsistent to a most puzzling degree. He concludes, modestly enough, as follows:—"Without supposing or desiring that any importance will be attached to my mere opinions, yet, to prevent misapprehension, I here briefly recapitulate what are at present my own views on Mesmerism. Of the alleged results of mesmeric processes, I believe there are

"*Proved*—Quietude; composure; sleep.

"*Probable, but requiring confirmation*—Traction; muscular rigidity; convulsions; heightened sensibility; diminished sensibility; double consciousness.

"*Possible, but not very probable*—Insensibility to severe pain, for a given length of time, at pleasure.

"*Impossible, as far as any thing can be so*—Clairvoyance; intuition; prevision; community of thought; involuntary and complete subjection of mind to the mesmeriser.

"And, lastly, I believe that we have not a shadow of evidence in

support of the existence of any new agency, whether designated mesmeric, magnetic, occult, or by any other name."

The Skull and Brain in Old Age.—M. Parchappe, in his *Recherches sur l'Encephale*, vol. i., p. 74, states that, according to his observations, it is not till after the age of seventy that diminution of the brain becomes perceptible; "and here," says he, "my observations confirm what has been advanced by most physiologists, as to the loss of substance which the brain experiences under the influence of old age. We have seen," he adds, "that decrepitude has the effect of diminishing the volume and weight of the skull. It appears well established that, by the progress of age, the density of the cerebral substance becomes sensibly diminished. Every thing tends to convince us that the diminution of the weight of the brain of old persons is due to the influence of a double cause, the simultaneous diminution of density and of volume."

Books received.—The British and Foreign Medical Review, No. XXXVIII., April 1845.—Manuel Pratique de Phrénologie, ou Physiologie du Cerveau d'après les Doctrines de Gall, de Spurzheim, de Combe, et des autres Phrénologistes. Par le Docteur Fossati, Président de la Société Phrénologique de Paris. Avec 37 portraits et 6 figures d'Anatomie, intercalés dans le texte. Paris et Londres: Bailière. 1845. 12mo, pp. 608.—An Introduction to Homœopathy. Edited by J. J. Drysdale, M.D., and J. R. Russell, M.D. London: J. Leath. 1845. Post 8vo, pp. 253.—Slavery in the United States: a Letter to the Hon. Daniel Webster. By M. B. Sampson. London: S. Highley. 1845. 8vo, pp. 88.—The Zoist, No. IX., April 1845.—The American Journal of Insanity. No. I.—The American Phrenological Journal, from September 1843 to June 1844 inclusive; and two copies of each number from December 1844 to February 1845 inclusive.—The Magnet (N. Y.), from February to August 1844.—Zeitschrift für Phrenologie, No. VII., September 1844. Heidelberg: Karl Groos.—The London Medical Directory, 1845. 12mo. J. Churchill.—Seven Lectures on Somnambulism, translated from the German of Dr Arnold Weinhold; with a Preface, &c., by J. C. Colquhoun, Esq. Edinburgh: A. and C. Black. 12mo, pp. 219.—Ethnographic Map of Great Britain and Ireland, by Dr Gustaf Kombst; with relative letter-press. Edinburgh: W. and A. K. Johnston.—The Medical Times, weekly.

Newspapers received.—Liverpool Times, March 29.—Manchester Exhibition Gazette, March 29.—Manchester Times, April 26.—Freeman's Journal, May 1.—Bolton Chronicle, June 7.—Limerick Chronicle, June 11.—The New Moon, Nos. 5, 6, 7, and 8.

To Correspondents.—The article on Comparison is under consideration.—Mr Norrington's letter will be inserted.—We expect to find room for Mr Hytche's paper in next number.—Several articles of intelligence are unavoidably postponed.

Communications for the Editor (prepaid) may be addressed to Mr ROBERT COX, 25 Rutland Street, Edinburgh. Books or parcels, too heavy for the post, may be left (free of expense) with the London publishers, Messrs Simpkin, Marshall, & Co., Stationers' Hall Court.—Articles intended for the next following Number must always be with the Editor *six weeks before the day of publication*. Communications for the section of "INTELLIGENCE," and also Advertisements, should be in hand at least a fortnight before the same day. Charges for advertising:—Eight lines, 6s.; twelve lines, 7s. 6d.; every additional line, 6d.; half a page, 14s.; a whole page, 25s. Advertisements may be sent to the publishers in Edinburgh or London.

EDINBURGH, 1st July 1845.

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NEW SERIES.—No. XXXII.

I. MISCELLANEOUS PAPERS.

I. On the State of Phrenology in South-western Germany.
By GEORGE COMBE.

TO THE EDITOR OF THE PHRENOLOGICAL JOURNAL.

HOMBURG, 22d August 1845.

SIR,—I have this season revisited the banks of the Rhine, and have now the pleasure of informing you of the progress of Phrenology in these provinces. In travelling through Belgium, I was informed that M. Mareska, physician to the Maison de Force or Penitentiary of Ghent, and Professor of Chemistry in the University of that city, has taken an interest in Phrenology, and has made a collection of the skulls of such criminals as have recently died in the Penitentiary; and that M. Idgiez of Brussels keeps for sale a collection of phrenological casts and busts; but I did not obtain this information until it was too late for me to visit these individuals, which I much regret. In Brussels I had the pleasure of conversing with the celebrated M. Quetelet on the subject of Phrenology, and found him not only free from all prejudices against it, but alive to its importance, and anxious to apply it in his own statistical inquiries. He expressed his regret that, owing to the want of exact phrenological measurements of the head at different ages, and in different nations, he could not blend Phrenology with his statistics of crime and education. In this sentiment I cordially participated; but remarked, that while so much remains to be done in merely

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teaching the truths which are already ascertained, and in repelling objections, and while no public encouragement is given to phrenological investigations, it is scarcely to be expected that individuals in different countries should devote their time and talents to making extensive measurements which few could appreciate, and fewer still apply.

In ascending the Rhine, I had the pleasure of renewing my acquaintance with Mr Hülle, the schoolmaster of Königs-winter, at the foot of the Drachenfels. He has completed a manuscript translation of the School Edition of my work on "The Constitution of Man," submitted it to the Prussian superintendent of public schools at Cologne for his perusal, and obtained his approval of it; and he only waits for the means of printing it, in order to offer it to the schools of his district for the use of their scholars.

On arriving at Wiesbaden, I found a course of phrenological lectures actually in progress by Dr Scheve, of Heidelberg, already known to your readers as one of the collaborators in the German Phrenological Journal. He informed me, that in December and January last, he had delivered a course of lectures on Phrenology in Carlsruhe, the capital of the Grand Duchy of Baden, and had sixty subscribers. In Frankfort-on-the-Maine he delivered a course in April. In June he lectured in Mayence, and had seventy-five subscribers, and above twenty-five visitors at each lecture. One-third of his subscribers belonged to the medical profession, and a considerable number to the law. They passed resolutions at the close of the course, expressive of their deep interest in the subject, and high gratification with Dr Scheve's exposition of it. At Wiesbaden he had an audience of fifty persons, all permanent residents in the town, who were so much interested in his lectures, that he was requested to repeat them. The course extends from eight to fifteen lectures, according to the character of the audience. One circumstance occurred at Wiesbaden, which is worth mentioning. M. Garnier, the master of a French institution for the education of young men, at Fredericksdorf (about three miles from the place where I now write), happened to attend the lectures at Wiesbaden. He was so much struck with the importance of their subject in education, that he invited Dr Scheve to come to Fredericksdorf and deliver a course, and promised him forty pupils out of his own institution. Dr Scheve has come to Fredericksdorf and visited the institution, but has not yet been able to make arrangements for complying with M. Garnier's wishes. He returns soon to Heidelberg to push forward an application which he has already made to the Senate of the

University of that town for permission to lecture to the students on Phrenology, as an extra professor. His request has been opposed by some of the professors, but seconded by others ; and he expects in time to surmount all obstacles, and to become the first recognised professor of Phrenology in any university in the world. I hope that Scotland will be able to boast the honour of priority in an appointment of this kind ; but whichever country shall take the lead, it is clear that the day of the admission of Phrenology into established universities is fast approaching, and were the example once set, and a few able professors of the science furnished with the means of communicating its truths, under the sanction of public authority, to students, its progress would be irresistible, and its influence far greater than is at present dreamt of by its opponents.

Mr Von Struve, in addition to his duties of editor of the German Phrenological Journal, has now those of editor of the *Mannheimer Journal*, a daily newspaper of extensive circulation ; and he employs the influence which it gives him in promoting the advance of the science among his countrymen. Amidst his other efforts, the following deserves particular notice. He is publishing sketches of the development of brain and natural talents and dispositions of such of the remarkable men of Germany as he can induce to submit their heads to his manipulation, and to give their consent to publication ; and his success in obtaining both of these concessions is great. He presents his readers with an amusing history of his applications, and of the receptions he met with : from some direct refusals, and from others courteous permission. " My first attempt," says he, " was directed to Herr Von Itzstein, the leader of the opposition in the Commons House of Deputies of the Grand Duchy of Baden ; with whom I found also Vice-Chancellor Bekk, the president of the Chamber of Deputies. I submitted my proposal to them both, and both complied with my request. Herr Von Itzstein could not, at that moment, present his head for examination on account of a severe tooth-ache ; but I manipulated that of the venerable Vice-Chancellor Bekk. Next day (2d April), I waited on Herren Bassermann and Mathy, the former of whom received my solicitation with loud bursts of laughter, but, nevertheless, soon expressed his readiness to submit, out of complaisance to me. The examination of his head, and that of his friend Mathy, was immediately accomplished. On the 4th of April I went to Heidelberg, and received from Herren Welcker, Gervinus, and Schlosser, the permission which I solicited. The examination instantly took place, and was to me of the highest in-

terest, and the more so as it was seasoned with the most interesting conversation. On Sunday, I examined the head of my colleague Dr Hecker—expedited the cast of the head of Herr Mathy—and received from the latter his remarks on my analysis of his natural character. All the gentlemen whom I had solicited promised me similar observations. On 8th April, I went to Carlsruhe, where my success was not great. Only my old friends, the brothers Marschall von Bieberstein, declared themselves ready to give up their heads to my phrenological examination, and on the condition that nothing on the subject should be published. This diminished my interest in them. Nevertheless, I examined the head of the elder brother Augustus, at that time Councillor of State, and a Member of the Ministry for Foreign Affairs. I scarcely obtained permission from him to publish the results of my examination after his death. Privy-Councillor Nebenius, who received me with his accustomed friendship and amiability of manner, expressed, nevertheless, many objections against the examination of his head; at one moment declaring his anxious wish to remain in obscurity, and the next, that he had not then time to spare. I did not return to him, as it appeared to me that his concession, if afterwards granted (which he spoke of as probable), might be yielded out of complaisance, and in opposition to his own inclination. The President of the Ministry of State, Herr von Bökh, received me with a very grave countenance, which became still more serious when he heard the object of my visit. He said, that posterity must decide whether he was one of the distinguished men of the nineteenth century or not. I answered, that posterity, however, could have no means of instituting a phrenological examination of his head; but he remained firm in his position. Only when I assured him that I should not farther intrude, and took hold of the handle of the door, did his countenance brighten up, and he dismissed me with some polite and friendly expressions.

“On the 10th of April I reached Stuttgart, and repaired first to Paul Pfizer, who put a decided negative on my request. An interesting conversation, however, on the condition of Germany, compensated me for my phrenological disappointment.” “Chapel-Master Lindpainter surrendered his head to me with the readiest good will, although I came to him rather inopportunistly, when he had company at table. In the evening I found the Chancellor Von Wächter at home, and the examination of his head proceeded, amidst the most interesting conversation. On the 11th I examined the heads of two former friends, now political opponents, the Deputy

Römer and the Minister of State Von Schlayer. The difference of their characters is strongly indicated in the differences of their heads. After an unsuccessful call for the Deputy Düvernoy, I proceeded to the university town of Tübingen.

“ My first visit was directed to Uhland. Although, on the announcement of my name, he gave me a very friendly reception, he betrayed evident uneasiness when I stated the object of my call. I read his answer not merely in his countenance, but in the movements of his whole body.” Mr Von Struve left him without farther attempts on his head. “ I proceeded next to Professor Ewald, the second member of the German Siebengestirnes, whose head I desired to examine. We immediately fell into a most interesting conversation. Commencing with Phrenology and its relations to other sciences, we touched on the present circumstances of our native country. I never shall forget the three instructive hours which I spent with this truly amiable and high-minded man.”

Mr Von Struve next received from Herr Von Schlayer his remarks on the phrenological analysis of his head, and, after an unsuccessful attempt to procure daguerreotype portraits of the individuals who had permitted him to publish his examinations of their heads, he returned to Mannheim. On the 5th June he examined the head of the celebrated Von Itzstein, already mentioned. He then proceeds to lay before the public full details of the measurements, phrenological developments, and natural characters of the persons before named who had consented to the publication, beginning with Vice-Chancellor Bekk.

Some of your readers, judging by English standards, may view these proceedings as ludicrous, others as enthusiastic, and some perhaps as impertinent ; but here they have a different aspect. Mr Von Struve is of a family distinguished in Germany for its high diplomatic employments ; he himself is known as an author ; and by profession he is known as an active liberal barrister in the supreme court of Baden, besides editing a daily newspaper. Of his position in society, therefore, of his personal character and attainments, and of the scientific object of his solicitations, there could be no question. Hence, his generally cordial reception, and the confidence reposed in him by so many men occupying eminent stations and offices in their several states, is easily explained. In so far as regards the utility of his project towards the advancement of the science, nothing, in my opinion (if his sketches be correctly executed), could be better conceived. We all like to dissect individual character ; and if the subjects

be distinguished men, our attention is the more deeply riveted by an able portraiture of their minds. Such sketches, therefore, possess an inherent interest that will carry them into general circulation, wherever the individuals are known. The simple fact of such persons submitting their heads to examination, permitting the publication of the results, and furnishing their own commentaries on them, implies a degree of respect to Phrenology which is well adapted to recommend it to serious consideration. Only on the supposition of the sketches being unsuccessfully drawn can it injure the cause ; and this I do not apprehend.

Mr R. R. Noel, in a recent letter from Rosawitz, informs me that he has now in the press a new and greatly improved edition of his systematic work on Phrenology.

These facts, gleaned in a very short time, and in a limited extent of territory, prove that the Germans are at length awakening to the merits of Gall's discovery. Dr Scheve has promised to furnish me with a written narrative of his own proceedings and experience ; but from his numerous engagements, he cannot supply it in time to find a place in your next publication. I am, &c.

GEO. COMBE.

II. *An Inquiry into the Distinctive Characteristics of the Aboriginal Race of America.* By SAMUEL GEORGE MORTON, M.D., Author of "*Crania Americana*," "*Crania Ægyptiaca*," &c. (Concluded from p. 225.)

4. *Maritime Enterprise.*—One of the most characteristic traits of all civilized and many barbarous communities, is the progress of maritime adventure. The Caucasian nations of every age present a striking illustration of this fact: their sails are spread on every ocean, and the fabled voyage of the Argonauts is but a type of their achievements from remote antiquity to the present time. Hence their undisputed dominion of the sea, and their successful colonization of every quarter of the globe. The Mongolians and Malays, though active and predatory, and proverbially aquatic in their habits, are deficient in that mechanical invention which depends on a knowledge of mathematical principles ; while they seem also incapable of those mental combinations which are requisite to a perfect acquaintance with naval tactics. The Negro, whose observant and imitative powers enable him to acquire with ease the details of seamanship, readily becomes a mariner, but rarely a commander ; and history is silent on

the nautical prowess of his race. Far behind all these is the man of America. Savage or civilized, the sea for him has had few charms, and his navigation has been almost exclusively restricted to lakes and rivers. A canoe excavated from a single log, was the principal vessel in use in the New World at the period of its discovery. Even the predatory Charibs, who were originally derived from the forests of Guayana, possessed no other boat than this simple contrivance, in which they seldom ventured out of sight of land; and never excepting in the tranquil periods of the tropical seas, when they sailed from shore to shore, the terror of the feebler natives of the surrounding islands. The canoes of the Arouacs of Cuba were not more ingeniously contrived than those of the ruder Charibs; which is the more surprising, since their island was the centre of a great archipelago, and their local position, therefore, in all respects calculated to develope any latent nautical propensities. When Cortez approached in his ships the Mexican harbour of Tobasco, he was astonished to find even there, the seaport, as it were, of a mighty empire, the same primitive model in the many vessels that skimmed the sea before him. Let us follow this conqueror to the imperial city itself, surrounded by lakes, and possessed of warlike defences superior to those of any other American people. The Spanish commander, foreseeing that to possess the lake would be to hold the keys of the city, had fifteen brigantines built at Tlascala; and these, being subsequently taken to pieces, were borne on men's shoulders to the lake of Mexico, and there re-constructed and launched. The war thus commenced as a naval contest; and the Spanish historians, while they eulogize the valour of the Mexicans, are constrained to admit the utter futility of their aquatic defences: for although the subjects of Muntezuma, knowing and anticipating the nature of the attack, came forth from the city in several thousand boats, these were so feebly constructed, and managed with so little dexterity, that in a few hours they were all destroyed, dispersed, or taken by the enemy.

Turning from the Mexicans, we naturally look to the Peruvians for some further advances in nautical skill; but although their country was comparatively a narrow strip of land, with an extended frontier on the ocean, we find even here the same primitive vessels, and the same timid navigators. It is indeed questionable whether they ever designedly lost sight of land; nor does it appear that they made the sea subservient to their conquests. These were uniformly prosecuted by land, excepting, perhaps, those of the Incas, in their efforts to subdue the fierce islanders of Titicaca; but even

the partial pen of Garcilaso limits all these inventions to log canoes and rafts of reeds ; nor does it appear that the ingenuity of these people, so abundantly displayed on many other occasions, had ever added an improvement to the primeval germ of navigation.

Nor are those tribes which depend almost wholly on fish for their daily subsistence, much better provided than the others. The Chenouks and other nations on the western coast of America, have boats hewn with comparative ingenuity from a single plank, and compared to a butcher's tray ; but in these frail vessels they keep cautiously within sight of land, and never venture on the water unless the weather is favourable to their enterprise. It is to be observed, however, that when the Indians are compelled to carry their boats across portages from river to river, they construct them of birch bark, and with a degree of ingenuity and adaptation much above their usual resources. Thus, boats that would carry nine men do not weigh over sixty pounds, and are, therefore, conveyed with ease to considerable distances. This is almost the only deviation from the log canoe, and is equally characteristic ; for it is common among the interior Indians of both North and South America, and was noticed by De Solis in the Mexican provinces.

Inferior in these respects to the other tribes are the Fuegians ; a people whom perpetual exposure and privation, and the influence of an inhospitable climate, have reduced to a feeble intelligence,—the moral childhood of their race. Not even the stimulus of necessity has been able to excite that ingenuity which would so amply provide for all their wants ; and they starve amid the abundant stores of the ocean, because they possess no adequate means for obtaining them. The Falkland and Malouine islands, in but fifty degrees of south latitude, South Georgia, New South Shetland, and some smaller islands in nearly the same parallel, were, at their discovery, entirely uninhabited ; nor is there any evidence of their ever having been visited by any American tribe. Yet they possess seals and other marine animals in vast numbers, and in these and all other respects appear to be not less productive than the region inhabited by the Esquimaux.

It is generally supposed that nautical enterprise results from the necessity of the case, in nations proximate to, or surrounded by, the sea. We have seen, however, that the natives of the islands of the Gulf of Mexico were exceptions to the rule ; and we find another not less remarkable in the archipelago of Chiloe, on the coast of Chili. These islands are seen from the shore, and have a large Indian population,

which depends for subsistence on fish taken from the surrounding ocean ; yet, even so late as the close of the past century, after more than two hundred years of communication with the Spaniards, their boats appear not to have been the least improved from their original model. The padre Gonzalez de Agueros, who resided many years among these islanders, describes their canoes as composed of five or six boards, narrowed at the ends, and lashed together with cords, the seams being filled with moss. They have sails, but neither keel nor deck ; and in these frail and primitive vessels the inhabitants commit themselves to a tempestuous sea in search of their daily food. The same miserable vessels are found in exclusive use in the yet more southern archipelago of Guaitecas, in which a sparse population is distributed over eight hundred islands, and depends solely on the sea for subsistence. The mechanical ingenuity of these people, therefore, is not greater than that of the other Indians ; but, from constant practice with their wretched boats, they have acquired a dexterity in the use of them unknown to any other tribe, and in some instances, under the direction of the Spaniards, have become comparatively good mariners.

De Azara mentions a curious fact in illustration of the present inquiry. He declares, that when his countrymen discovered the Rio de la Plata, they found its shores inhabited by two distinct Indian nations, the Charruas on the north, and the Patagonians on the south ; yet, strange to say, these restless people had never communicated with each other for war or for peace, for good or for evil, because they had neither boats nor canoes in which to cross the river.

The Indian is not defective in courage even on the water ; but he lacks invention to construct better vessels, and tact to manage them. When he has been compelled to defend himself in his frail canoe, he has done so with the indomitable spirit of his race ; yet, with all his love of war and stratagem, I cannot find any account of a naval combat in which Europeans have borne no part.

The Payaguas Indians, at one period, took revenge on the Spaniards, by infesting the rivers of Paraguay in canoes, which they managed with much adroitness ; and, darting from their lurking places, they intercepted the trading vessels going to and from Buenos Ayres, robbing them of their goods, and destroying their crews without mercy. Such was their success in these river piracies, that it required years of war and stratagem on the part of the Spaniards to subdue them.

The only example of a naval contest that I have met with,

is described by Dobrizhoffer to have taken place between the so-called Mamalukes of St Paulo, in Brazil, and their enemies the Guaranies. The former were a banditti derived from the intermarriage of the dregs of Europeans of all nations with the surrounding Indians; and, assisted by two thousand of their native allies, they came forth to battle in three hundred boats. The Guaranies, on the other hand, had five ships, armed with cannon. But it is obvious, from this statement, that European vessels and European tactics gave the battle all its importance. It took place on the river Mborore, in Paraguay; but after all, both parties, finding themselves out of their element on the water, at length abandoned their vessels by mutual agreement, and fought to desperation on shore.

It is said of the inhabitants of New Holland, that their only substitute for a boat is a short and solid log, on which they place themselves astride, and thus venture upon the water. Even this, the humblest of all human contrivances, was in use among the Indians of the Bay of Honduras, who had learned to balance themselves so dexterously, standing upon a log, as to be able, in this position, to pursue their customary occupation of fishing in the adjacent sea.

In fine, his long contact with European arts, has furnished the Indian with no additional means of contending with the watery element; and his log canoe, and boat of birch bark, are precisely the same as at the landing of Columbus.

5. *Manner of Interment.*—Veneration for the dead is a sentiment natural to man, whether civilized or savage: but the manner of expressing it, and of performing the rites of sepulture, differ widely in different nations. No offence excites greater exasperation in the breast of the Indian, than the violation of the graves of his people; and he has even been known to disinter the bones of his ancestors, and bear them with him to a great distance, when circumstances have compelled him to make a permanent change of residence.

But the *manner* of inhumation is so different from that practised by the rest of mankind, and at the same time so prevalent among the American nations, as to constitute another means of identifying them as parts of a single and peculiar race. This practice consists in burying the dead in the *sitting posture*; the legs being flexed against the abdomen, the arms also bent, and the chin supported on the palms of the hands. The natives of Patagonia, Brazil, and Guayana; the insular and other Charibs, the Florida tribes, the great chain of Lenapé nations, the inhabitants of both sides of the Rocky

Mountains, and those also of Canada, and the vast North-western region, all conform, with occasional exceptions, to this conventional rite. So also with the demi-civilized communities from the most distant epochs; for the ancient Peruvians, to whom we have already so frequently referred, possessed this singular usage, as is verified by their numberless remains in the sepulchres of Titicaca. They did not, however, bury their dead, but placed them on the floors of their tombs, seated, and sewed up in sacks. The later Peruvians of the Inca race followed the same custom, sometimes inhuming the body, at others placing it in a tower above ground. Garcilaso de la Vega informs us, that, in the year 1560, he saw five embalmed bodies of the royal family, all of whom were seated in the Indian manner, with their hands crossed upon the breast, and their heads bent forward. So also the Mexicans, from the most ancient time, had adopted the same usage, which was equally the privilege of the king and his people. The most remarkable exception to the practice in question, is that in which the body is dissected before interment, the bones alone being deposited in the earth. This extraordinary rite has prevailed among various tribes, from the southern to the northern extremities of their range, in Patagonia, Brazil, Florida, and Missouri, and indeed in many intervening localities; but, even in these instances, the bones are often retained in their relative position, by preserving the ligaments, and then interred in the attitude of a person seated. An example, among very many others, is recorded by the Baron Humboldt, in his visit to a cavern-cemetery of the Atures Indians, at the sources of the Orinoco, wherein he found hundreds of skeletons preserved each in a separate basket, the bones being held together by their natural connections, and the whole disposed in the conventional posture of which we are speaking.

I am well aware that this practice has been noticed by some navigators among the Polynesian islands; the instances, however, appear so few as rather to form exceptions to the rule, like those of the Nassamones of Northern Africa: but I have sought for it in vain among the continental Asiatics, who, if they ever possessed it, would have yet preserved it among some at least of their numberless tribes.

After this rapid view of the principal leading characteristics of the American race, let us now briefly inquire whether they denote an exotic origin; or whether there is not internal evidence that this race is as strictly aboriginal to America as the Mongolian is to Asia, or the Negro to Africa.

And first, we turn to the Mongolian race, which, by a

somewhat general consent, is admitted to include the Polar nations, and among them the Esquimaux of our continent. It is a very prevalent opinion that the latter people, who obviously belong to the Polar family of Asia, pass insensibly into the American race, and thus form the connecting link between the two. But without repeating what has already been said in reference to the Indian, we may briefly advert, for the purpose of comparison, to the widely different characteristics of the Esquimaux. These people are remarkable for a large and rather elongated head, which is low in front and projecting behind; the great width and flatness of the face is noted by all travellers; their eyes are small and black, the mouth small and round, and the nose is so diminutive and depressed, that on looking at a skull in profile the nasal bones are hardly visible. Their complexion, moreover, is comparatively fair, and there is a tendency throughout life to fullness and obesity. The traveller Hearne, while in company with a tribe of northern Indians, mentions a circumstance which is at least curious, because it shews the light in which the Esquimaux are regarded by their proximate neighbours on the south. He was the unwilling witness of a premeditated and unprovoked massacre of an entire encampment of Esquimaux, men, women, and children; and it is curious to remark, that the aggressors apologised for their cruelty not only on the plea of an ancient feud, but by asserting that their unoffending victims were a people of different nature and origin from themselves, even in respect of sexual conformation.

The moral character of the Esquimaux differs from that of the Indian chiefly in the absence of the courage, cunning, cruelty, and improvidence, so habitual in the Red Man, who, in turn, is inferior in mechanical ingenuity, and, above all, in aquatic exercises. The Esquimaux, notwithstanding the intense cold of his climate, has been called an amphibious animal, so readily and equally does he adapt himself to the land or water. His boat is an evidence of mechanical skill, and the adroit manner in which he manages it is a proverb among mariners. The women are not less expert and enterprising than the men: each possesses a boat of peculiar and distinctive construction; and Crantz informs us that children of the tender age of seven or eight years commence the unassisted management of their own little vessels.

How strongly do these and other traits which might be enumerated, contrast with those of the Indian, and enforce an ethnographic dissimilarity which is confirmed at every step of the investigation!

Some writers, however, think they detect in the Fuegian a being whose similar physical condition has produced in him all the characteristics of the Esquimaux ; but we confidently assert that the latter is vastly superior both in his exterior organization and mental aptitude. In truth, the two may be readily contrasted but not easily compared. The Fuegian bears a coarse but striking resemblance to the race to which he elongs, and every feature of his character assists in fixing his identity. The extremes of cold, with their many attending privations, by brutifying the features and distorting the expression of the face, reduce man to a mere caricature,—a repulsive perversion of his original type. Compare the Mongols of Central Asia and China, with the Polar nations of Siberia. Compare also the Hottentot with the contiguous black tribes on the north ; the Tasmanian negro with the proper New Hollander ; and lastly, the wretched Fuegian with the Indian beyond the Magellanic strait ; and we find in every instance how much more the man of a cold and inhospitable clime is degraded, physically and intellectually, than his more fortunate but affiliated neighbour. The operation of these perverted causes through successive ages of time, has obscured but not obliterated those lineaments which, however modified, point to an aboriginal stock.

Without attempting to enter the fathomless depths of philology, I am bound to advert to the opinion of Mr Gallatin, that all the nations from Cape Horn to the Arctic Ocean, have languages which possess “ a distinct character common to all, and apparently differing from those of the other continent with which we are acquainted ;” an analogy, moreover, which is not of an indefinite kind, but consists, for the most part, in peculiar conjugational modes of modifying the verbs by the insertion of syllables. It has been insisted by some writers that this analogy proves the cognate relation of the Esquimaux and Indians. This, however, is a mere postulate ; for, from the evidence already adduced in respect to the ethnographic difference between these people, we have a right to infer that the resemblance in their respective languages has not been derived by the greater from the lesser source,—not by the Americans from the Esquimaux, but the reverse : for the Asiatics having arrived at various and distant periods, and in small parties, would naturally, if not unavoidably, adopt more or less of the language of the people among whom they settled, until their own dialects finally merged in those of the Chepewyan and other Indians who bound them on the south.

The Esquimaux, it may be remarked, at the present time

extend much further south, and are much more numerous, on the western than on the eastern coast of America, being found as low down as Mount St Elias ; south of which, contrary to what is observed on the opposite side of the continent, they become more or less blended with the Indian tribes, and have imparted to the latter some portion of their mechanical ingenuity. This difference in the extent and influence of the western and eastern Esquimaux, is explained by the proximity of the former to Asia ; and a redundant population has even forced some of them back to the parent hive, whither they have carried a dialect derived from the cognate tribes of America. Such are the Tsutchchi, who thus form a link between the polar nations of the two continents.

It is a common opinion, also, that America has been peopled by the proper Mongols of Central and Eastern Asia ; and volumes have been written on supposed affinities, physical, moral, and intellectual, to sustain this hypothesis. We have already glanced at the Mongolian features, as seen, though rudely and extravagantly developed, in the Polar nations ; but there are some characters so prevalent as to pervade all the ramifications of the great Mongolian stock, from the repulsive Calmuck to the polished and more delicately featured Chinese. These are the small, depressed, and seemingly broken nose ; the oblique position of the eye, which is drawn up at the external angle ; the great width between the cheek bones, which are not only high but expanded laterally ; the arched and linear eyebrow ; and lastly, the complexion, which is invariably some shade of yellow or olive, and almost equally distant from the fair tint of the European and the red hue of the Indian. Without attempting a detailed comparison, we may briefly observe, that the Mongolian, in his various localities, is distinguished for his imitative powers and mechanical ingenuity, and for a certain degree of nautical skill, in which, as we have suggested, he holds a place next to the nations of the Caucasian race. In fine, we are constrained to believe that there is no more resemblance between the Indian and Mongol in respect to arts, architecture, mental features, and social usages, than exists between any other two distinct races of mankind. Mr Ranking has written an elaborate treatise to prove that the Mongols, led by a descendant of Genghis Khan, conquered Peru and Mexico in the thirteenth century ; but in the whole range of English literature there cannot be found a work more replete with distorted facts and illogical reasoning. The author begins by the singular assertion that " when Cuzco was founded by Manco Capac, none of the civilization introduced by the Peruvians and Mexicans was in

existence;" thus overlooking the cultivated tribes who preceded the Inca family, and disregarding also the various demi-civilized nations which successively followed each other in Mexico, before that country fell under the rule of the Aztecs.* Mr Ranking introduces the Mongols in large ships, with all the appliances of war, not even excepting elephants; and in order that the Tartar general may correspond to Manco Capac, he is made to enter Peru by the lake Titicaca, upwards of a hundred miles from the sea. Such statements may seem too absurd for sober discussion; but they are not more so than various other subtleties which have been resorted to in explanation of the precise manner in which the new world has been peopled from the old.

But there is not a shadow of evidence that the Mongols ever reached America in ships excepting by mere accident; and, therefore, their number must have always been too small, and too badly provided, to have dreamt of conquest in a country which has had a population of millions from immemorial time.

There is a third view of this question which remains to be noticed; for, allowing that the Esquimaux and the cognate Polar nations are not the progenitors of the American race; and admitting also that the Mongols of central Asia could never have arrived in any requisite number by a direct voyage from one continent to the other, yet it is supposed by many learned men that these Mongols could have reached America by slow journeys from their own distant country; and that their hieroglyphic charts delineate many of the incidents of this protracted migration: but there is no positive evidence in regard to direction and localities, although these, by a very general consent, are placed in the north and north-west. Cabrera, on the contrary, after the most patient research, aided by unusual facilities for investigation, traces the primal seat of the civilized nations of America to southern Mexico, where the ruined cities of Copan, Uxmal, and Palenque, point to an epoch seemingly much more remote than any antiquities contained in or near the present metropolis of that country.

If we conventionally adopt the more prevalent opinion, and trace the Aztecs back to California or the strait, we have after all but a vague tradition of a handful of persons who, for all we know to the contrary, may have been as indigenous to America as any people in it. The aborigines of this continent have always been of nomadic and migratory habits; a fact which is amply illustrated in the traditional history of

* *Crania Americana*, p. 96.

Mexico itself. So also with the barbarous tribes ; for the Lenapé, the Florida Indians, the Iroquois, the insular Charibs, and many others, were intruding nations, who, driven by want, or impelled by an innate and restless activity, had deserted their own possessions to seize upon others which did not belong to them. These nations, like their more polished neighbours, were in the constant practice of recording the events of their battles and hunting excursions by hieroglyphic symbols, made, according to circumstances, on trees, skins, or rocks ; and this rude but expressive language of signs has been justly regarded as the origin of the picture-writing of the Mexicans. "The difference between them," observes Dr Coates, "does not appear greater than must necessarily exist between ignorant warriors and hunters in a simple form of society, and those of the members of a complicated state possessed of property, and even, as described by Clavigero, of a species of science and literature."

This gradation of the ruder into the more perfect art of hieroglyphic writing, not only affords an additional argument for the unity of origin of the American nations, but also constitutes another proof of the distinctness of their race ; for this picture-writing, even in its most elaborate forms, bears no other than the most general resemblance to any exotic hieroglyphics, nor, indeed, has a real equivalent been detected between them. We may, therefore, be permitted to repeat our conviction, that the annals of the Mexicans bear no indisputable evidence of immigration from Asia ; but, on the other hand, that they are susceptible of as many different interpretations as there are theories to be supported.

It is remarked by Dr Coates, that the Mongolian theory, which we are now considering, is objectionable on account of its vastness. "To derive the population of the whole of the American continent from the north-western angle, requires the supposition of a continued chain of colonies during a long succession of ages, acquiring and using an immense diversity of languages, and pursuing each other along the huge ridge of the great American Andes, from Prince William's Sound in the far north, to the extremity of Terra del Fuego, a distance of one hundred and fifteen degrees of latitude, or of eight thousand miles. This long succession of occurrences is absolutely necessary to the theory ; which is thus liable to the difficulty of requiring two extensive hypotheses at once. Several hundred colonies must be imagined to have issued from the same point all completely isolated, as their languages abundantly shew, unconnected by peaceful intercourse, but urging each other by war and the destruction of

the game, throughout a third part of the circumference of the globe.

"The traces of such a series of human waves would be naturally looked for in a tendency to advance population in the north, from which they emanated, and where the pressure must have been greatest, and the colonization of longest duration. Nothing like this is observed: the population of South America, and of Darien, Guatemala, and Mexico, being much greater in proportion than that of any country farther north. The marks of early civilization, too—one of the most important proofs of long residence in a fixed spot—are all, as in the older world, in favour of the tropical climates."*

We may further inquire, how it happens that, during the lapse of more than three hundred years since the discovery of America, there has not been an authenticated immigration from Asia? The long and desolating wars which have driven whole nations from the central to the northern parts of that continent, have not supplied a single colony to the New World. Nay, if such colonization had occurred within a thousand or two thousand years, would we not now possess more indubitable evidences of it in language, customs, and the arts?

We propose, in the next place, to make a very few observations in reference to the idea that America has been peopled by the MALAY race, which, in the ordinary classification, includes the Malays proper of the Indian Archipelago, and the Polynesians in all their numberless localities. These people, however, have so much of the Mongolian character, that nearly the same objections arise to both. The head of the Malay proper is more like that of the Indian, because it not unfrequently presents something of the vertical form of the occiput; and the transverse diameter, as measured between the parietal bones, is also remarkably large. But excepting in these respects, the osteological development coincides with that of the Mongolian; while the category of objections which we have just urged against the latter people is equally valid in respect to the whole Malay race. For, independently of differences of organization, how great is the disparity in their arts and social institutions! So great, indeed, that, to account for it, Dr Lang, one of the most ingenious supporters of the theory, insists on an intellectual degeneracy consequent to change of climate and circumstances. "It is an easy and natural process," says he, "for man to degenerate in the scale of civilization, as the Asiatics have evidently done in

* On the Origin of the Indian Population of America. By B. H. Coates, M.D. 1834.

travelling to the northward and eastward. He has only to move forward a few hundred miles into the wilderness, and settle himself at a distance from all civilized men, and the process will advance with almost incredible celerity. For whether he comes in contact with savages or not, in the dark recesses of the forest his offspring will speedily arrive at a state of complete barbarism."

We confess our difficulty in imagining how the Polynesians, themselves a barbarous people, though possessing some of the attributes of civilized life, should become savages in the tropical regions of America, wherein the climate must be as congenial to their constitutions as their own, and the various other external circumstances are calculated to foster rather than to depress the energies of a naturally active and intelligent people. But the general prevalence of easterly winds is adverse to the colonization of America from the islands of the Pacific; for the nearest of these islands is one thousand eight hundred miles from the American coast; and when we reflect on the many difficulties which the mere distance opposes to navigation in small vessels, and the absolute necessity for food and water for a long period of time, we feel compelled to believe that America has received very feeble accessions to its population from the Polynesian islands. Such voyages, if admitted, could only have been accidental; for it is not to be supposed that these islanders would have attempted remote discoveries in the vast Pacific Ocean in the very face of the trade winds; and a successful issue is among the least probable of human events.

Even admitting that the Polynesians have accomplished all that the theory requires, how does it happen that, on reaching the continent of America, they should all at once have relinquished their intuitive fondness for the water, forgotten the construction of their boats, and become the most timid and helpless navigators in the world?

A comparison of languages, moreover, gives no support to the Polynesian hypothesis; for all the zeal and ingenuity which have been devoted to this inquiry, have tended only to disclose a complete philological disparity.

The theories to which we have thus briefly adverted, would each derive the whole American population from a single source; but various others have been hazarded of a much more complex nature, by which the Indian nations are referred to a plurality of races, not even excepting the Caucasian. For example, the Peruvians, Muyscas, and Mexicans, are, by some advocates of this system, supposed to be Malays or Polynesians, while all the savage tribes are referred to the

Mongolians; whence the civilization of the one and the barbarism of the other. But we insist that the origin of these great divisions must have been the same, because all their ethnographic characters, not excepting the construction of their numberless languages, go to enforce an identity of race.

Another doctrine which has had many disciples (among whom was the late Lord Kingsborough, author of *Mexican Antiquities*), teaches that the whole American population is descended from the Jews, through the Ten lost Tribes which were carried away by Salmanazer, King of Assyria. Here, again, the differences of physical organization should set this question at rest for ever; but, independently of these, can we suppose that a people so tenacious as the Jews of their literature, language, and religion, would not have preserved a solitary, unequivocal memorial of either among the multitudinous tribes of this continent, if any direct affiliation had ever existed between them? In short, we coincide in opinion with a facetious author, who sums up all the evidence of the case with the conclusion, that "the Jewish theory cannot be true, for the simple reason that it is impossible."

We feel assured that the same objection bears not less strongly on every other hypothesis which deduces any portion of the American nations from a Caucasian source. In order to solve the problem of the origin of the monuments of America, independently of any agency of the aboriginal race, an opinion has been advanced, that they are the work of a branch of the great Cyclopean family of the old world, known by the various designations of the Shepherd Kings of Egypt, the Anakim of Syria, the Oscans of Etruria, and the Pelasgians of Greece. These *wandering masons*, as they are also called, are supposed to have passed from Asia into America at a very early epoch of history, and to have built those more ancient monuments which are attributed to the Toltecan nation. This view, supported as it is by some striking resemblances, and especially in architectural decoration, leaves various important difficulties entirely unexplained; it necessarily presupposes a great influx of foreigners, to account for such numerous and gigantic remains of human ingenuity and effort, at the same time that no trace of this exotic family can be detected in the existing Indian population. They and their arts are equally eradicated; and we can, at most, only conceive of the presence of these migratory strangers in small and isolated groups, which might have modified the arts of an antecedent civilization, while they themselves were too few in number to transmit their lineaments to any aboriginal community.

Closely allied to this theory is that of our ingenious countryman, Mr Delafield, who derives the demi-civilized nations of America from "the Cuthites, who built the monuments of Egypt and Indostan." He supposes them to have traversed all Asia to reach Behring's Strait, and thus to have entered America at its northwest angle, whence they made their way, by slow journeys, to the central regions of the continent. Our objections to this theory will be found in what has been already stated; and we may merely add, that the *route* by which the author conducts his pilgrim adventurers appears to constitute the least plausible portion of his theory. Mr Delafield supposes the barbarous tribes to be of a different stock, and refers them to the Mongolians of Asia; thus adopting the idea of a plurality of races.

We shall lastly notice an imaginative classification, which separates the aborigines of America into four *species* of men, exclusive of the Esquimaux. This curious, but unphilosophical hypothesis, has been advanced by M. Bory de St Vincent, a French naturalist of distinction, who considers the civilized nations to be cognate with the Malays, and designates them by the collective name of the *Neptunian species*; while to his three remaining species,—the Columbian, the American, and the Patagonian, he assigns certain vague geographical limits, without establishing any distinctive characteristics of the people themselves. The system is so devoid of foundation in nature, so fanciful in all its details, as hardly to merit a serious analysis; and we have introduced it on the present occasion to illustrate the extravagance and the poverty of some of the hypotheses which have been resorted to in explanation of the problem before us.

Once for all, I repeat my conviction, that the study of physical conformation alone excludes every branch of the Caucasian race from any obvious participation in the peopling of this continent. If the Egyptians,* Hindoos, Phœnicians, or

* With respect to the Egyptians and Hindoos, as involved in this question, I can speak without reservation. Through the kindness of an accomplished gentleman and scholar, George R. Gliddon, Esq., late United States Consul at Cairo, I have received one hundred heads of Egyptian mummies from the tombs of Abydos, Thebes, and Memphis, &c.; and I unhesitatingly declare, that, with a few exceptions, which have a mixed character, and chiefly resemble the Coptic form, the conformation throughout is that of the Caucasian race.

The following extracts from my *Crania Egyptiaca*, just now published, appear to me to be conclusive on this point:

It was remarked fifty years ago, by the learned Professor Blumenbach, that a principal requisite for an inquiry such as we now propose, would be "a very careful, technical examination of the skulls of mum-

Gauls, have ever, by accident or design, planted colonies in America, these must have been, sooner or later, dispersed and lost in the waves of a vast indigenous population. Such we know to have been the fact with the Northmen, whose re-

mies hitherto met with, together with an accurate comparison of these skulls with the monuments." This is precisely the design I have in view in the following memoir, which I therefore commence by an analysis of the characters of all the crania now in my possession. These may be referred to two of the great races of men, the CAUCASIAN and the NEGRO, although there is a remarkable disparity in the number of each. The Caucasian heads also vary so much among themselves as to present several different types of this race, which may, perhaps, be appropriately grouped under the following designations:—

CAUCASIAN RACE.

1. The *Pelasgic Type*. (I do not use this term with ethnographic precision; but merely to indicate the most perfect type of cranio-facial outline.) In this division I place those heads which present the finest conformation, as seen in the Caucasian nations of western Asia, and middle and southern Europe. The Pelasgic lineaments are familiar to us in the beautiful models of Grecian art, which are remarkable for the volume of the head in comparison with that of the face, the large facial angle, and the symmetry and delicacy of the whole osteological structure.

2. The *Semitic Type*, as seen in the Hebrew communities, is marked by a comparatively receding forehead, long, arched, and very prominent nose; a marked distance between the eyes, a low, heavy, broad and strong, and often harsh development of the whole facial structure.

4. The *Egyptian form* differs from the Pelasgic in having a narrower and more receding forehead, while the face being more prominent, the facial angle is consequently less. The nose is straight or aquiline, the face angular, the features often sharp, and the hair uniformly long, soft, and curling. In this series of crania I include many of which the conformation is not appreciably different from that of the Arab and Hindoo; but I have not, as a rule, attempted to note these distinctions, although they are so marked as to have induced me, in the early stage of the investigation, and for reasons which will appear in the sequel, to group them, together with the proper Egyptian form, under the provisional name of *Austral-Egyptian crania*.

NEGRO RACE.

The true *Negro* conformation requires no comment; but it is necessary to observe that a practised eye readily detects a few heads with decidedly mixed characters, in which those of the Negro predominate. For these I propose the name of *Negroid crania*; for while the osteological development is more or less that of the Negro, the hair is long but sometimes harsh, thus indicating that combination of features which is familiar in the mulatto grades of the present day. It is proper, however, to remark in relation to the whole series of crania, that while the greater part is readily referrible to some one of the above subdivisions, there remain a few other examples in which the Caucasian traits predominate, but are partially blended with those of the Negro, which last modify both the structure and expression of the head and face.

The following is a Tabular View of the whole series of crania, ar-

peated, though very partial, settlements in the present New England States, from the tenth to the thirteenth centuries, are now matter of history; yet, in the country itself, they have not left a single indisputable trace of their sojourn.

In fine, our own conclusion, long ago deduced from a patient examination of the facts thus briefly and inadequately stated, is, that the American race is essentially separate and peculiar, whether we regard it in its physical, its moral, or its intellectual relations. To us there are no direct or obvious links between the people of the old world and the new; for, even admitting the seeming analogies to which we have alluded, these are so few in number, and evidently so casual, as not to invalidate the main position; and even should it be hereafter shewn, that the arts, sciences, and religion of America can be traced to an exotic source, I maintain that the organic characters of the people themselves, through all their endless ramifications of tribes and nations, prove them to belong to one and the same race, and that this race is distinct from all others.

This idea may, at first view, seem incompatible with the history of man, as recorded in the Sacred Writings. Such, however, is not the fact. Where others can see nothing but chance, we can perceive a wise and obvious design, displayed in the original adaptation of the several races of men to those varied circumstances of climate and locality which, while congenial to the one, are destructive to the other. The evidences of history and the Egyptian monuments go to prove that these races were as distinctly stamped three thousand

ranged, in the first place, according to their sepulchral localities, and, in the second, in reference to their national affinities.

Ethnographic Table of one hundred ancient Egyptian Crania.

Sepulchral Localities.	No.	Egyptian.	Pelasgic.	Semitic.	Mixed.	Negroid.	Negro.	Idiot.
Memphis, ...	26	7	16	1	1	1		
Maabdeh,...	4	1	1	2		
Abydos,.....	4	2	1	1				
Thebes,.....	55	30	10	4	4	5	...	2
Ombos,.....	3	3						
Philæ,.....	4	2	1	1	
Debôd,.....	4	4						
	100	49	29	6	5	8	1	2

five hundred years ago as they are now ; and, in fact, that they are coeval with the primitive dispersion of our species.*

III. *On the Abuse of Acquisitiveness by Society, and its Reflex Influence on Criminals.* By Mr E. J. HYTCHE.

There is no greater truth than this, that the abuse of an organ, be it physical or mental, implies, as a necessary consequence, the punishment due to it. The existence of so many cases of hereditary predispositions to specific disease or moral debasements, is but a developement of this law ; and the sceptic need but glance at the annals of any family to perceive that, as certainly as physical forms and family likenesses are propagated, " the sins of the fathers are visited upon the children." Most true it is, that the natural laws may not be violated with impunity, and that ignorance of those laws cannot be pleaded in bar of the punishment. It may also be added, that the punishment inflicted is generally analogous to that species of vice in which the man had indulged. Thus, for example, the children of drunkards often manifest so strong a passion for strong drinks, that education cannot eradicate the tendency : so, where parents are nervously irritable, we may trace the same characteristic in

* The following classification of the human species is a slight modification of that published in my *Crania Americana*. The *Races* correspond with those in Prof. Blumenbach's system, which latter differs but little from that of Buffon. The subdivision into *Families* is based upon ethnographic analogies, both physical and philological.

I. CAUCASIAN RACE.—A. The Japetic or Indo-European Branch. 1. The Pelagic or Caucasian Family. 2. The Germanic Family. 3. The Celtic Family. 4. The Indostanic Family.—B. The Semitic or Syro-Arabian Branch. 5. The Arabian Family. 6. The Hebrew Family.—C. The Hamitic or Ægypto-Libyan Branch. 7. The Nilotic or Egyptian Family. 8. The Libyan Family.

II. THE MONGOLIAN RACE. 9. The Mongol-Tartar Family. 10. The Turkish Family.* 11. The Chinese Family. 12. The Indo-Chinese Family.† 13. The Polar Family.

III. THE MALAY RACE. 14. The Malay Family. 15. The Polynesian Family.

IV. THE AMERICAN RACE. 16. The American Family. 17. The Toltec Family.

V. THE NEGRO RACE.‡ 18. The Negro Family. 19. The Caffrarian Family. 20. The Austral-African or Hottentot Family. 21. The Oceanic-Negro Family. 22. The Australian Family.

* The Turks are a mixed family of the Caucasian and Mongolian races, in which the latter predominates.

† The Indo-Chinese nations may yet prove to belong to the Malay race.

‡ Called the Ethiopian race by Professor Blumenbach.

their offspring, but in increased intensity; and cases have fallen under my notice where the fearfulest abuse of Amativeness might be traced as the fatal legacy of progenitors. If men, then, choose to indulge in ungoverned passion, the penalty must be paid; for as certainly as desolation follows in the track of the hurricane, will vicious indulgence be tracked by physical or mental agony.

Nor is this result confined to those abuses of the faculties of which society, to protect its interests, takes legal cognizance; but the same law is traceable in connection with those breaches of morality which are rarely denounced, because they are sanctioned by general example. It does not, however, enter into my present object to develop the result of the transgression of what are called the "minor morals," but I shall confine myself to the consideration of a few facts connected with the misuse of the organ of Acquisitiveness, with especial reference to that reflex influence which its abuse by society has upon our criminal population.

Probably no organ is more active in the British head than that of Acquisitiveness; it is that characteristic which first strikes the stranger who visits our shores, and the powerful manifestation of which led Bonaparte to designate us as a "nation of shopkeepers." In addition to its natural great development in the British head, it is placed as it were from earliest youth in a hot-bed of excitement; for the customs—those unwritten but most influential laws—of society stimulate it to the most intense activity; and, as almost all classes indulge its cravings to the utmost, the mere acquirement or maintenance of a respectable position requires the most energetic action of Acquisitiveness. It need scarcely be remarked, that the mere principle of trade, "to buy cheap and sell dear," needs the antagonism of powerful Conscientiousness to preclude that utter selfishness which is synonymous with utter demoralization; and, feebly developed as that organ is in the mass of mankind, we can scarcely be surprised that the majority succumb before a temptation in the propriety of which they are educated both at home and abroad. Not only our legislative, but our social institutions, are based upon a property qualification. It needs but a cursory glance to perceive that the *mere* possession of high intellectual or moral qualities, however much they may illustrate, are no passports to public consideration: the Arkwrights who know how to trade, supplant the Cramptons, who only know how to invent; and, by the mass of what are called the "respectable classes," the accumulation or display of wealth appears to be considered as that all in all for which man was created, and failure

in which would render the earth a blank. Thus society, although it repudiates the idea, is seen to be immersed in the rankest idolatry, and the god whom it venerates is—wealth !

And now follows the punishment interwoven into cerebral abuse. The very nature of Acquisitiveness is indicative of *un-satisfaction*. It can never know when it has had enough ; nay, it never can have enough, for, if it act at all, its very utterance must be—" You have not enough, and therefore must acquire !" We are not, therefore, to be surprised when we perceive the miser eagerly adding to a gold-chest which is already full to repletion ; for what wise men know to be sufficient to guard against those casualties, the knowledge of which legitimatises the action of Acquisitiveness, he, influenced by the organ, conceives to be far below that enough ; and, by the time that enough is acquired, the mere growth of the organ has necessarily enlarged the conception of enough—the very fact of growth, including the seeds of farther and indefinite growth. Thus, to the lip of the victim of un-governed Acquisitiveness, is presented a Tantalus-cup, ever alluring to untasted pleasure, but never quenching the thirst. A further evil result of abused Acquisitiveness must be noticed. It seems to be a peculiarly isolating organ ; its indulgence neutralizes, and at length precludes the operation of the less self-preferring organs—those organs which teach men that, whatever be their accidental station, they belong to the same great human brotherhood, and that that man has not fulfilled his duty to society who has not loved and served others as well as himself. It is to the dictum of this organ, in conjunction with Self-Esteem, that we must ascribe the origination of that false principle of caste which is as well defined among the British as among the Hindoos ; it is through the influence of this organ that we find friendship too generally based on the purse rather than on the man ; it is to this cause that we trace the general surrender of high mental powers to mere money-getting, which, if properly directed, were calculated to lead men in their social advance ; and thus the demoralization proceeds until the one rampant principle is selfishness, the sentiments become callous, the intellectual range narrowed, and wealth, if it does not become confounded with, is preferred to, happiness. A cordon is at length drawn, whereby the wealthy are separated from the poorer classes, as if the latter were infected with deadliest plague,—by which the one becomes inflated with an impertinent arrogance, and the other is degraded to abject servility, or unredeemable brutality.

But there are results still to be noticed which, if less glaring, are not the less prejudicial. I refer to the reflex influence which the misuse of Acquisitiveness by society has upon the criminal. It appears to me that the criminal class cannot be isolated from general society as if they had no features in common; but that, on the contrary, in their distinguishing crime, we may trace an exaggerated likeness of the characteristics of that majority from whom we derive our type of national morals. Well has it been remarked, that "it is not to be supposed that the criminal population is a creation apart; but it springs from the community, and is composed of the weaker and more excitable portion of every class." History confirms this statement: as is the nation, so is the criminal; and do we desire to learn the prevalent form of crime, for the inference we have but to learn the national vice. Thus, for example, in the fighting and plundering Roman patrician, we find the prototype of the turbulent marauding plebeian; and in the lazy lazzaroni of Naples we trace but a vulgarized copy of their indolent sensual aristocracy.

In like manner, the ruling vice of British society is the very form of crime which predominates among our criminal population. It appears, by an analysis contained in the 47th Number of the *Jurist*, that "out of an annual average of 25,987 criminal offences, 22,486, or 0·87 of the whole, are offences directly founded on the desire of acquiring property." Detached from the fact that crime is generally but an enlarged transcript of national vices, such a fearful item in our criminal statistics might well startle; but it does appear that this principle contains the clue to the cause of this disproportion. The proportions might have been reversed; and crimes against the person might have preponderated as in the case of those unhappy countries—Spain and Ireland. But in obedience to the principle, that the punishment consequent on the breach of the natural laws shall be analogous to the vice indulged, we find, in England, that crime against the person is the exception, and crime against property the rule. I would not be conceived as representing the reflex influence of society as the *sole* reason why the criminal class are most addicted to the abuse of Acquisitiveness; for, in addition to its being difficult to estimate the precise amount of that influence, it is obvious that poverty and insane * impulse tend

* So many cases of acquisitive monomania have been recently submitted for judicial investigation, that if there had been previously any hesitancy as to admitting the existence of this form of lunacy, these facts should suffice to dispel the doubts. But, if judicial cognizance is to be

to the crime. But it does appear, that if offence against property, as the characteristic crime of British criminals, is to be considered apart from the fact that abuse of Acquisitiveness is the distinguishing vice of Britain, our calculations as to its cause, and the best mode of repression, will be in vain, for we shall have disregarded an element, the consideration of which might have destroyed our theories.

We are too often apt to think, and many of our laws are framed on the supposition, that felons are men who deliberately sit down to consider whether they shall become thieves or not, and who become outlaws merely because the balance of pleasure turns in that direction. The more correct theory indicates that they are simply men of strong acquisitive impulse, without the ability or desire to labour, and devoid of that natural or educated moral sentiment which forbids infringement of the rights of others. A class of men is thus indicated, on whom the general misuse of Acquisitiveness must have a fatal influence; for the fact, that they trace in all classes the same disposition by which they are governed, must add fuel to a fire which it needs the utmost judgment to extinguish. They perceive that men are estimated not by what they *are*, but by what they *have*, and that the ability of a man is tested by what he *gets*, and not by what he *does*. Is it strange, then, that with the organization predicated, they should fail to discriminate between the legal and illegal gratification of Acquisitiveness? For example, they see so-called respectable tradesmen availing themselves of every paltry device to deceive the equally greedy purchaser, and yet retaining every honour to which affluence can lead; and they find even the leading minds of society, with here and there a bright exception, vending intellect as an article of merchandise; and thus every where the one lesson taught is—"Get money; honestly if you can—but get it!" Is it, then, so astonishing, that with brains, perchance, too feeble to compete in this overstocked market, but with impulse strongly pointing in the same direction, they should avail themselves of natural cunning, and steal what they cannot legitimately acquire? Instead, then, of resting contented with bitterly reproaching these pariahs of society, and thinking, that when we have secured their conviction and incarceration we have done all that we ought to do, let us at least enquire—Is not

taken of acquisitive monomania, an important question recurs, namely, Are the guardians of such persons justified in allowing them free scope for gratifying the depraved instinct? or ought they not rather be placed under that medical care which would be secured were they subject to any other hurtful form of mania?

society reaping the fruits of its own vicious indulgence, and that by the abuse of the very organ which itself most misuses? And farther, Has not society, by its own example, educated the crime which it deploras?

Should this connection of cause and effect be granted, it will follow, that if our marauding criminals are to become extinct, the enforcement of stringent laws by an effective police will not suffice to produce this result. Not only is the disease too deeply seated, but such a remedy would leave the cause untouched. The very fact that society stimulates the organ to the utmost, indicates the existence of a school from whence felons must of necessity emanate, the sole problem being, whether the student shall issue therefrom as the crafty tradesman or the expert thief. Society, then, must cease to teach, by its example and maxims, lessons which the bad heads are but too ready to follow and exaggerate. It must be practically acknowledged, and not merely pulpit-taught, that man has higher destinies than those involved in gold-hoarding—and that he who adds but one grain to the sum of human happiness is a wiser and better man, and has done more for the interests of the species, than if he had accumulated the riches of Cræsus. Let this be done, and then, at least, our felons could not turn round in bitter scorn and mock our cant, by saying—"Physician, heal thyself!" and if our jails were not untenanted, we could at least rejoice in the fact, that the crime had sprung from ungoverned impulse, and had not been learned in the University of the World!

March 1845.

IV. *Outline of a Lecture delivered to the Sheffield Phrenological Society, on 27th November 1844, by CORDEN THOMPSON, M.D., President of the Society, and Senior Physician to the Sheffield General Infirmary.**

GENTLEMEN,—The object of these lectures is to illustrate the primary truths on which Phrenology is based. For this purpose, I have shewn that the faculties of man are innate, uniform in character, and determinate in number and properties. I have next shewn that the faculties are connected with

* This imperfect sketch of Dr Thompson's lecture was drawn up by one of his auditors, and forms a continuation of article II. in our 82d Number, page 11 of this volume.—ED.

the organization, and rise and fall with it. In the last lecture I traced the phases of development in man, from infancy to maturity. On these subjects, I spoke of healthy persons, and of mankind in the aggregate, and not of exceptions, caused by disease or otherwise : on a future occasion, I shall endeavour to shew that the exceptions are but the results of the same law, under varied circumstances. It was shewn on the last occasion that the moral and intellectual man is developed along with the physical man. We traced man up to maturity ; but maturity contains the seeds of necessary decay. Decline begins in one sooner than in another ; there is great difference as to the length of time during which the energies of manhood, in different individuals, are maintained. The limits of mature age differ in the sexes : in females, it is usually from thirty to forty ; in the male, from thirty-five to fifty. But many exceed or fall short of the usual limits ; in short, figures here only indicate the average. In some persons, physical and mental qualities, station in life, exemption from toils and hardships, and from other causes involving serious wear and tear, cause maturity to be prolonged ; while in others, harder circumstances and different natural qualities cause them to be more aged at fifty than others at sixty or more. The parts of the body most taxed fail first ; and some of the organs of the senses are more delicate than others. In like manner, overworking the body or the intellect, which is, in truth, overworking the brain, produces early decay. A single limb may early decay from excessive use. Under ordinary circumstances, man rises from infancy to manhood, and descends from manhood to decay. The transitions are gradual, and each change, like a dissolving view, seems to vanish into its successor. As man approaches the evening of life, conscious of the diminished power of body and mind, he seeks repose, and avoids the turmoil and the toil he formerly never shunned. His words are, "I am no longer young !"—a great truth taught by nature. The brain is less active in thought, less agitated with emotion, and the powers are sensibly diminished. Elevated sentiments become blunted, and whatever tends to ennoble man appears in age to shrivel up. The relish for active sports and gaieties is diminished, not merely from physical, but from mental unfitness ; both mind and body desire repose. With this change, it seems as if the world had undergone a revolution. Each reasons according to his temperament ; age deems itself wondrous wise, and, pressed by a more active race, consoles itself with scraps of philosophy and savoury remembrances. The old man recurs much to the past, the record of many dis-

appointments; and even where full fruition has been achieved, yet, the power to enjoy being diminished, the mere memory of past enjoyment ill compensates for the loss of the possession, and the conclusion is come to, that life is but a dream. Thus nature teaches truths before known, but never really believed or realised. The perceptive, affective, and intellectual powers, are diminished. It is not satiety and disgust that brings about the change, but age, dulling the edge, and producing a gradual degeneration in the senses and tastes, whether inward or outward. Hence, objects once all-engrossing become flat, stale, and unprofitable; but the objects have undergone no change, and will be as much enjoyed by future as by past generations. Gravity and prudence are qualities as natural to age as levity and haste to youth, and equally agree with the organisation. As the passions are daily cooling down, the virtues of abstinence become more attractive, and men are prone to

“Compound for sins they are inclined to,
By damning those they have no mind to.”

The changes now described come not upon men of one disposition of character only, but on all. The old saying, that an old head cannot be placed on young shoulders, is a truth founded on the inevitable changes which nature produces in men. There is a natural antagonism between youth and age, increasing as age advances. Thus Shakspeare says—

“Crabbed age and youth cannot dwell together;
Youth is full of pleasure, age is full of care,” &c.

The changes of our organization determine the changes of character. (This subject Dr Thompson illustrated by the remarks of many eminent writers, all bearing testimony to the same great truth.) The intellectual powers decline in the same manner as the affective and physical powers. In fact, in those who live long, the brain sensibly diminishes. Thus gradually fall the powers of men, till they sink at length into the weakness of childhood. The corporeal changes that precede and usher in age, are remarkable. The vegetative processes of the frame change. In early life, the fluid exceed the solid parts of the body, and the arterial system the venous. Hence the active nutrition, the roundness of form, and the rosiness of tint in youth. But the sallow complexion, the rigidity of fibre, comes with age. The arterial branches are contracted, and the vessels become daily more rigid, and the finer vessels are impervious to the blood. At the same time, the veins lose their firmness, and are filled with a dark purple fluid, unfit for nutrition, or to carry on life. The arterial

blood, too, becomes less stimulant and nourishing. Hence arise loss of flesh, disappearance of the roundness of contour, and wrinkles of the skin, which does not contract in proportion to the waste of substance beneath it. The change is felt in the less vigorous and steady beating of the heart, the enfeebled action of the lungs, and the diminished amount of blood circulated, and with diminished force; hence an additional diminution of power in the brain. The general hardening and wearing away of parts, and the diminution of nervous power, explain why the gait is feeble and unsteady, the body stooping, and other marks of age apparent. The senses, one after another, fail and become obtuse; the impressions from without are superficial and faint, so as to be soon forgotten. Hence comes the treacherous memory of age, often the first indication of the inroads of time. First, names escape, then events, and at last even the events of yesterday are forgotten, while those of early life are vividly remembered. The highest faculties, whether intellectual or moral, are the last to attain maturity, but the first to shew marks of decay. They seem to require the greatest exertion of nature to arrive at their full power, and soonest fail. They may be compared to that most elaborate of vegetable productions, the flower, which no sooner blooms than decay approaches. These truths are important. It is natural that the old should become indifferent to passing events and desire repose. The change not only diminishes the susceptibility of impression, but renders the faculties sluggish; not only are they less easily roused to exertion, but the exertion is evanescent. There is one instinct that exerts the utmost influence on feeling and thought in the advance towards maturity; this power is one of the first to decline, and its decay produces striking changes in the character. Sudden transformations of character often occur towards the close of manhood: faculties, previously almost dormant, seem to awake, and those which were active before become inert. Thus, men have stepped from thrones into convents, and become devotees. But these changes are not found in age, still less in green old age. The reasoning powers, late in arriving at maturity, soon become more slow to act and more easily fatigued. How thoroughly the force of intellect is broken by age is proved by the rarity of any man above sixty engaging in any new intellectual pursuit. Mental habits, like those of the body, establish their sway, and become a second nature; the powers are with difficulty exerted but in beaten tracks. Hence the dislike of the aged to what they called innovations. Among many illustrations of a striking character which might be adduced, is the fact,

that the Reformation was chiefly opposed by the old and supported by the young. It has been observed, that no great improvements arise in the Universities; this naturally follows from the fact, that the professors are chiefly elderly men, who pertinaciously cling to the past. The conclusion of the subject I reserve for another occasion. The horizon of man expands up to maturity—then gradually contracts; and we shall hereafter observe how it continues to contract, until it ends in dissolution.

V. *On the Inability to Distinguish Colours.* By PLINY EARLE, M.D., Physician to Bloomingdale Asylum for the Insane. (From the American Journal of the Medical Sciences, April 1845.)

In the European journals of science, a number of cases have, from time to time, been reported of an inability accurately to perceive and discriminate between different colours, in persons whose visual organs, in all other respects, both of organization and function, appeared perfectly normal. In the *American Journal of the Medical Sciences* for August 1840, Dr Hays, in connection with his report of the unique and very interesting case of Mary Bishop, published the result of an analysis of these cases, by which it appears that there are several gradations in the extent of the defect in question.* A philosophical arrangement is thus established, which, being founded upon facts, must be permanent; although there is a possibility that future observations may modify it in some respects.

The object of this paper is, *first*, to report a number of cases which have come within the knowledge of the writer, and most of them under his own observation, but none of which have hitherto been reported; *secondly*, to substantiate and further illustrate some of the peculiarities attendant upon the physiological phenomena under discussion; and, *thirdly*, to point out other peculiarities which, if heretofore observed, have not been mentioned by any author whose treatise upon the subject has been examined by the writer.

§ 1st. *Cases hitherto unpublished.*

I. R. M.—An elderly gentleman who, for many years, and from conscientious motives, dressed in drab; but while all the other external garments were of this colour, his cravat was invariably red.

* [See Phren. Jour., xiv., 149, 358.]

2. Z. G.—A gentleman who could not distinguish between red and green.

3. U. K.—A young man who, at the age of twenty-five years, first discovered that he could not discriminate between several colours. He thought that a bright scarlet tape exactly corresponded in hue with a steel-blue ruler.

4. * *—A preceptor in the interior of Massachusetts. At the time when it was customary to wear bows of ribbon upon the lower extremities of the pantaloons, he attended a *soirée* with red bows upon blue pantaloons.

5. Mrs A., of the county of Worcester, Massachusetts. I have never seen this lady, but, from anecdotes illustrative of her defective perception, I am induced to believe that there are but two or three colours which she can accurately distinguish.

6. C. D.—A gentleman to whom red, green, brown, &c., appeared identical. His defect was not discovered until he was nearly forty years of age.

7. J. W., aged 35 years. It is said that he can perceive but one colour in the rainbow.

8. J. M., of Salem, Massachusetts. I was passing a few weeks in the country, during the early part of summer, and this gentleman, at that time seventeen years old, stopped, with his sister, at the same place as myself. I one day accompanied him upon a long ramble, during which we arrived at a place abundantly prolific of the winter-green, the *Gaultheria procumbens* of the botanists. The berries were as numerous as the leaves, so that one would have believed that no person, unless he were remarkably short-sighted, could stand, even at the distance of ten feet, without beholding them in myriads. Being fatigued, we sat down in the midst of them; but I soon perceived that my companion, in gathering them, was obliged either to place his head very near the ground, or to take hold of the leaves with one hand, and feel under them with the other. Yet his eyes were not myopic. Immediately suspecting that his difficulty arose from an inability to distinguish colours, I picked some of the leaves, both red and green, of the *Gaultheria*, and with these, the berries, grass, and other leaves, made a series of comparisons and contrasts sufficiently apparent to ordinary vision, but they were all imperceptible to that of my companion.

Upon returning to the house, and when in company with his sister, I placed a bright scarlet bandanna handkerchief upon a green table-cover, and asked him the difference in

colour of the two. He asserted, most positively, that they were alike, to the utter astonishment of his sister, for neither she nor any of his family had ever suspected his defect.

9, 10. Two gentlemen, one in the city of New York, the other in one of the towns upon the Hudson river. They cannot distinguish between red and green. Farther than this, I am unable to describe their cases.

Besides these, *twenty-one* cases have come within my knowledge, a more elaborate notice of which will be given in another section of this article. The following account of one of them, written by the gentleman who is the subject of it, is more appropriately inserted in this connection :—

“ The general appearance of the rainbow, to me, is that of an object striped with three colours—yellow, orange, and blue—gradually blended into each other, and themselves varying in their shades. I am unable to say whether, with a good prism, I could, using care, distinguish and mark seven distinct colours produced by it.

“ As a general rule, however, it seems true that the difference between me and others, is more a want, on my part, of a quick and vivid perception of distinctions, rather than an absolute inability to discern them ; for I rarely find two colours which appear different to others placed in juxtaposition, without my being able to perceive that they differ from each other. Yet the impression upon my mind is so imperfect, that, on seeing them again, at least in some cases, I might be unable to give their respective names correctly. In some few instances, where colours are really different, perhaps I might not discern that difference if they were placed side by side. This, however, would be where the ground colour of both was the same, but one of them slightly tinged with red, such as pale blue and lilac of about the same depth of colour, or deep blue and violet.

“ I can always distinguish correctly a full blue, a scarlet, or yellow, and generally orange also, if near my eyes and examined with care. *I can discern yellow and blue of moderate depth at a great distance ; but, at any considerable distance, I might not know whether a red was really a red or a deep green, brown, or olive.* I cannot, in general, know whether some olive cloths are really olive or brown ; but there are some browns that I can be sure of as being of that colour. *I cannot see red apples, or red cherries, or red strawberries, at any considerable distance, so as to distinguish them from the foliage ; or, where I do distinguish them, it is not so clearly as I see the green ones.*

"Red, I think, appears brighter and plainer to me by candle-light, than in the day; so does blue, but yellow more faint than by daylight. I sometimes have mistaken a light green for a drab. The red which has some mixture of yellow is more vivid to my eyes; that which is crimson, or nearly so, resembles blue to some degree. Of the three principal colours, yellow is most distinct. All colours are agreeable to me, though I suspect red is less so than to people in general. Those red flowers which have a tinge of either yellow or blue, are, I think, more pleasing than those which are of a pure red.

"In the vast variety of compound colours, where there is a slight predominance of blue over red, I am unable to tell which predominates, and, of course, am liable to miscall the names. I find, however, that my perception of shades has improved by practice, *as it has of musical notes, in which I was deficient*; and I am disposed to think that, with application, I might perfect myself so as to be rarely mistaken."

Before proceeding to another section, it is proper to remark, that of the *twenty-one* individuals whose cases are alluded to above, but *fifteen* are now living, and these are so widely scattered that it has been impossible for me to make a series of similar observations in their cases. I believe, however, that I am warranted in saying, that, in every instance, there was an inability to discriminate between red and green.

The irides of the person whose account of his own case is just given, are light blue, mottled with white. Those of his brother, who has the defect, are blue with an imperfect band, or "ray," of a light bistre colour, surrounding the pupil. Those of one of the two nephews of these men, who have the defect, are gray, with a band around the iris similar to that just mentioned, though somewhat darker; and those of the other nephew are blue. In one of the cases published by Dr Nicholl, it is said that the "eyes are gray, with a yellow tinge around the pupil;" and in a case recently reported by Dr Boys de Loury, the irides were "light blue, interspersed with yellow spots towards the centre." In one case that I have examined, the irides exactly corresponded with those last mentioned.

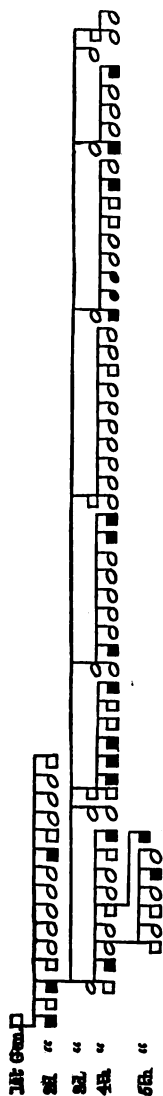
§ 2. *Peculiarities heretofore observed.*

- a. *The inability to distinguish colours is hereditary; and,*
- b. *When thus entailed, it sometimes overleaps one generation or more.*

c. Males are more frequently affected than females.

a. In several of the cases reported in foreign publications, the truth of this proposition is demonstrated; but in none of their families did the peculiarity prevail so extensively as in that of which the author of this article is a member. My maternal grandfather and two of his brothers were characterized by it; and among the descendants of the first mentioned, there are *seventeen* persons in whom it is found. I have not been able to extend my inquiries among the collateral branches of the family, but have heard of one individual, a female, in one of them, who was similarly affected.

For the purpose of clearly illustrating the prevalence of this physiological peculiarity in the family, I have prepared the subjoined genealogical chart. Males are represented by squares, and females by circles. For those who cannot distinguish colours, the squares or circles are wholly black.



The chart includes five generations. Nothing is known of the first generation, in regard to the power of perception in colours. In the second, of a family consisting of seven brothers and eight sisters, three of the brothers, one of whom, as before mentioned, was the grandfather of the writer, had the defect in question. In the third generation, consisting of the children of the grandfather aforesaid, of three brothers and four [six ?] sisters, there was no one whose ability to distinguish colours was imperfect. In the fourth generation, the first family includes five brothers and four sisters, of whom two of the former have the defect; in the second family there was but one child, a daughter, whose vision was normal; in the third there were seven brothers, of whom four had the defect; in the fifth, seven sisters and three brothers,* of all of whom the vision is perfect in regard to colour; in the sixth, four brothers and five sisters, of whom two of each sex have

the defect; in the seventh, two brothers and three sisters, both of the former having the defect; in the eighth there

* According to the *chart*, nine sisters and one brother.—ED. P. J.

was no issue, and in the ninth there are two sisters, both of them capable of appreciating colours.

Seventeen of the persons in the fourth generation are married, and the whole number of their children is fifty-two. Many of the latter are very young, some of them not living, and as the defective perception has hitherto been detected in but two of the families, those alone are placed in the chart as the fifth generation. In one of them, consisting of three brothers and three sisters, one of the brothers has the defect; and in the other, a male, an only child, is similarly affected.

b. The overleaping of one generation by the hereditary peculiarity of vision, is satisfactorily shewn by the chart; in which it appears, as has been mentioned, that there are no cases in the third generation. Furthermore, in the cases of the two males of the fifth generation, it will be perceived that neither parent nor grandparent had the defect; so that there was an interval of *two* generations between the manifestations of that defect.

c. That males are more frequently deficient than females, in the power of distinguishing colours, is manifestly confirmed by the cases mentioned, for the first time, in this article. These cases are *thirty-one* in number, *twenty-seven* of them being of males, and but *four* of females. Of the twenty persons represented in the foregoing chart as having the defect, *eighteen*, or nine-tenths of the whole, are males.

This disparity of numbers of those affected in the two sexes, is no less strikingly exhibited by the ratio between the whole number of persons of either sex and the number of those who have the peculiarity. Thus, in the chart, there are eight special families in which the defect prevails—one in the second generation, five in the fourth, and two in the fifth. These families include *thirty-two* males, of whom *eighteen*, or nine-sixteenths of the whole, have the defect; and *twenty-nine* females, of whom *two*, or about one-fifteenth of the whole, also have it.

§ 3. *Peculiarities hitherto unnoticed.*

a. *The power of accurately distinguishing colours varies at different times in the same individual.*

b. *The inability to distinguish colours is not unfrequently connected with, or accompanied by, a defective power of discriminating between musical notes.*

a. In the man represented as the youngest of the first family of the fourth generation in the chart, it would appear that, at times, the functions of the “organ of colour”—to presuppose the truth of an undemonstrated theory—were performed with nearly as great a degree of perfection as in

persons who can make the most delicate chromatic distinctions; while, on other occasions, the defective action of that "organ" involves the individual in the most absurd mistakes. In describing a domestic fowl, he spoke of it as "the yellow hen with a blue tail;" and, some years afterwards, being rallied upon the subject of his singular ornithological discovery, he declared that "if the tail was not *blue*, it was *pink*."

It was evident that the colours which this young man usually confounds, appear to him by candle-light much more nearly as they do to other people, than when they are seen by the light of the sun. The same is true in regard to red and blue, in the person whose account of his perceptive powers of colour is given in the foregoing pages. The explanation of this is probably found in the fact, that the light of our artificial means of illumination is much more yellow than that of the sun, and gives to the colours ordinarily unrecognized a certain degree of its own hue—a hue which is perceptible to all who have the defect, excepting such as come under the "worst degree" in the classification of Dr Hays.

6. In the foregoing account which is related in the language of him who is the subject of it, it is stated that the writer's perception of musical notes was "deficient"—I may add, from observation, that it was *very* deficient; but, as the writer observes, it has been improved by attention and practice. The whole family, of which the chart has been exhibited, is probably no less generally characterized by a defective musical ear than an imperfect appreciation of colours. Several of the individuals comprised in it are utterly incapable of distinguishing one tune from another. In some of the branches, however, where there was a high degree of musical talent *in the family of the other parent*, several of the individuals inherit it, and, among them, two who cannot distinguish colours.* They are remarkably quick in "catching a tune."

A gentleman who has the general defect under discussion, and whose case is included in the "thirty-one" herein mentioned, is a well-known professor in one of the metropolitan medical schools of the United States. In him, the total inability to discriminate between musical sounds is co-existent with the defective perception of colour. Notwithstanding the absence or imperfection of the powers mentioned, powers which, it would appear, are essential to the true poet, the poetical talents of this gentleman are such that, had he

* This suffices to prove that the two defects, although they may "accompany," are not "connected with," each other.—ED. P. J.

sacrificed unto them the truths of natural science, he might undoubtedly have attained a distinguished rank in that department of literature.

Another of the gentlemen, whose case of defective perception of colours is herein noticed, is generally acknowledged as one of the first and greatest of American poets now living. He also is unable to distinguish one tune from another; yet his poetry is not deficient in the requisites of perfect cadence, harmony, and rhythm. In regard to colour, his defect is such as is described in the "worst degree" of the arrangement of Dr Hays. He says, that previously to the time at which he ascertained this peculiarity of his vision, he always wondered that people should talk of "glorious sunsets," and "beautiful sunsets," inasmuch as he could detect neither "glory" nor "beauty" in them. The kaleidoscope of nature and the harmonicon of art are the Utopias of his mind. The magic hues developed by the prism, the iridescence of shells and minerals, the inimitable colours of the beasts and birds of tropical climates, the verdure of the fields of spring, the splendour of the autumnal foliage of the forests, the myriad-hues of flowers, and the realm of beauty which springs, as sprang Minerva from the brain of Jupiter, from the genius of the artist,—all these, it would appear, are, comparatively, "as a sealed book" to him. Yet from his writings no evidence of this can be detected. The *poet* throws his gossamer veil of ideality before the vision of the *man*, converting a sombre world into a paradise like that of the Persian. Seated upon the borders of Helicon, he looks abroad upon a universe transformed by imagination, and glowing with all the colours of a phantasmagoria. The iris of heaven lifts its expansive arch in hues as varied and as vivid as when first placed there, "to establish a covenant" between God and man; the sun descends now invested with the mellow tints of the skies of Italy, and now surrounded by clouds emblazoned like those which attend its setting in America alone; fields are clad with a carpet of emerald, and flowers blossom with all the diversity of colouring that ever decked them in the gardens of the East; birds spread to the wind pinions as gorgeous as those that wave over the Amazon or the Ganges, and the mineral world glitters with the concentrated beauty of amethyst, topaz, beryl, and all the precious stones adorning the foundations of the wall of the New Jerusalem which was revealed unto the apostle in Patmos.

This remarkable and apparently irreconcilable union of exalted poetical genius with an inability to distinguish either colour or tune, must be considered as one of the most won-

derful of psychological phenomena. To analyze the mind thus constituted would task the acumen of the phrenologists and the metaphysicians.

Before closing, I wish to direct attention, for a moment, to the question, "Whence arises the inability to distinguish colours?" There are persons who object to this proposition, as being irrational and absurd. They maintain that there is no standard for the perception of colours, no criterion by which, in comparing the powers of two individuals, we are enabled to say which approaches the nearest to perfection, or which is the most nearly accurate. Indeed, they go further, and assert that there is no evidence of the identity or similarity of the impression of any colour upon the minds of any two individuals whose powers of chromatic distinction are considered perfect and normal;—that colour which is blue to the "mental vision" of one, may be green, red, or yellow, to that of the other; and so of any two colours whatever. Strictly speaking, the position of these objectors is true. No one can describe the mental perceptions which are received through the organs of vision, excepting by the use of conventional terms, the signification of which, as applied to the abstract nature and quality of the perception, may differ in the estimation of different individuals. Colour, considered only in reference to its existence in the mind, is ideal; and no one can "give colour to an idea." Although A and B, whose perceptive powers are perfect in regard to colour, agree in calling a lemon yellow and the grass green, yet it is impossible to prove that to A the hue of the grass is not the same as that of the lemon to B, and *vice versa*.

No true philosopher, however, would resort to this argument. It is specious but unsound; and he who would rest upon it must inevitably become involved in a difficulty with reference to many departments of science, from which he could hardly extricate himself otherwise than by the subterfuge of the doctrine of Bishop Berkeley, that "all matter is ideal." It cannot be denied that certain rays of light, impinging upon the retina, produce an effect which, transmitted to the sensorium, whether modified or not in its passage through the optic nerves, gives an impression or perception of colour that the mass of mankind are consentaneous in calling "red."—As the anatomical structure of the organs concerned in the process, and also the functions of those organs, are, if normal, identical in different individuals, it is rational to conclude that the results of their action will be the same.

The several theories promulgated by different authors, as

explanatory of the inability to distinguish colours, may be resolved into two classes:—

1st, Those which place the cause of the defect in the apparatus of vision ; and,

2d, Those which suppose it to be in the organ of perception. We are disposed to give preference to the latter ; but we have nothing upon the subject to add to the excellent treatise of Dr Hays, further than to quote, without adopting its doctrines as the cause of the defect in question, the following extract from the *Annales Medico-Psychologiques*, for Jan. 1844. “ M. Chevreuil has shewn that there is a harmony and a system of laws in colours as well as in sounds ; that there are false colours, as there are false notes, which shock sensitive persons ; and that there are some colours which, like certain notes, cannot accompany each other without proving exceedingly offensive.” It is unnecessary, then, to regard the incapacity to distinguish colours as the result of an alteration of the retina, or of the optic nerve, but as often being the effect of a predisposition, natural or acquired.

VI. *Materialism and Immaterialism, and their Moral and Religious Bearings.*

[The following observations appear to us so rational and soberly expressed, and withal so well calculated to dispel the alarm of those who see nothing but danger and impiety in the doctrine of Materialism, that we cannot refrain from laying them before our readers. They form part of a notice of *Vestiges of the Natural History of Creation*, in *The Prospective Review* for March 1845. We regret to observe that the reviewer, who in general discusses candidly the opinions expressed in the *Vestiges*, has allowed himself to speak so unjustly of Phrenology, as to say that “ the proofs to which it appeals, when proof of its truth is asked, are similar to those of Astrology, viz., specimens of remarkable predictions.” —ED.]

The supposed tendency of modern physiology to Materialism has peculiarly alarmed Protestant divines. We are not concerned with the truth or falsehood of the opposite theories which have been advanced on this subject ; but with their religious aspect. The Author of this volume is a decided Materialist ; but he holds that this does not in the slightest degree affect the truths of Theism ; since the development of

faculties whereby we surpass the brutes, is precisely that which puts us into contact with Deity. The whole subject of Materialism has been so involved in verbal controversy, that we desire here to try to clear off much that is extraneous.

First, let it be observed, that if (according to a current opinion) Materialism consists in supposing that the soul possesses weight, extension, visibility, and other properties of matter, all the ancients were materialists. Beyond a doubt, Job, Ezekiel, and John, equally with Plato, Cicero, and the Christian fathers, conceived of spirit as nothing but thin matter—vapour or gas; and the philosophic idea of spirit, now current in the regions of learning, is not older than the days of the European Schoolmen. It is at once evident that the recent philosophy cannot be of essential moment to religion.—But such a view of Materialism is for many reasons unsatisfactory. Electricity, light, and heat, are regarded even by those moderns who hold the corpuscular theory concerning the two last, to be void of gravitation, and (we believe) of inertia. Yet it is evidently Materialism to teach that the substance of the soul is made of these ingredients.

Next; to those who will have it that nothing is Spirit which has a proper attachment to Space or Time, we think it may be fairly replied that *our* souls do not fulfil this condition. If we know anything about them at all, it is that they stand in most intimate relation to our bodies, and are susceptible of change, growth, and decay, with the progress of time.

But we believe the real question under debate may be fairly stated as follows :—

The Immaterialist alleges that that entity or essence, a result or action of which is Consciousness, Thought, Feeling, Voluntary Motion, serves *no other purpose* than to produce these very phenomena; and does not act (within the sphere of our ordinary experience) except in organized bodies :—The Materialist, on the contrary, alleges that the substance or force whereby we think, feel, and move, subserves not only these functions in the bodies which we call animated, but *other functions likewise* in *un-organized* bodies, popularly called inanimate. Which of the two doctrines is true, appears to be an intelligible and legitimate question of natural philosophy. There is no self-inconsistency in either assertion. Facts must decide between them, and dogmatism for or against appears to us equally out of place. The Immaterialists, however, are—we are disposed to say habitually—guilty of misrepresentation; as though their opponents said, or ought to say, that there was any “likeness” between

Thought and Matter. This would be about as absurd as to hold that Attraction was like Matter, or, indeed, the Soul like Thought. We know nothing of substance except by the phenomena displayed; and we infer similarity of substance only from similarity of phenomena. Motion of the limbs being one marked symptom of life, as soon as it was discovered that galvanism would move the limbs of a dead animal, a link was found between life and those forces which animate unorganized matter. Vastly more proof than such an isolated fact is needed to demonstrate their identity; but other facts of the same kind may (for aught we know) be hereafter elicited. Meanwhile, there is no absurdity in auguring that Materialism may in time be proved true, nor is it unprofitable to seek out experiments which may help to test it. The controversy must be decided by physiological and physical discoveries, not by internal speculation, nor by imagined religious necessities.

But we cannot stop short here. We further assert, that the doctrine of Materialism, if it be ever so true, ought not to affect any doctrine of morality or of religion, rightly so called. To put this in a strong light, let us be allowed to make an extravagant supposition, which will give every advantage to the opposite argument. Suppose that a future Mr Crosse should succeed in constructing a living dog out of inorganic matter, by a series of galvanic operations, and that this dog should display all the sagacity and affections of other dogs: this would be the most decisive imaginable proof of the identity of that substance by which brutes think, feel, and live, with electric and other forces which act on unorganized matter. Yet such an experiment would not have the most remote tendency to undo our experience and our internal perceptions that truth, justice, disinterestedness, humility, compassion, purity, are better than their opposites; it could not justly lower our reverence and admiration for the great Power who presides over the universe which we behold, or alter in any point the posture of our hearts and spirits towards Him. The sphere of religion is the inner and moral world; and as no external discoveries of philosophy change the moral and spiritual nature of man, fear of any permanent harm to religion from this quarter is vain. Unwillingly, however, we must confess that such fears do *temporarily* verify themselves. For if the professors of religion proclaim that certain doctrines of philosophy are subversive of religion, too many are found to take them at their word.

No doubt it is a prevailing idea, that the doctrine of Immaterialism is essential as a foundation for that of Future Re-

tribution. Rightly to discuss this question might need half a volume. Here it may suffice broadly to protest against basing such a doctrine on physical subtleties. The experience of the old Platonists and other schools which committed this error, might sufficiently warn us against it. A man who believed his soul to be immortal, because it was an unchangeable atom in which his self consisted, was irresistibly carried to believe his *past* as well as his *future* immortality; and therefore lost all idea of "person" in connection with his soul. As Archbishop Whately well states it:—"They believed, not their souls, but the substance of their souls, to be immortal:" and personality being dropped, Pantheism crept in, which was nothing but veiled Materialism in its most objectionable form. Equally clear is it, that the immortality of the lowest brutes,—a limpet or a fly,—perhaps even that of the souls of vegetables, follows from the same reasoning; as may be seen indeed in Butler's Analogy: and all moral import in a future existence becomes more than problematical. But the very basis of the theory is in direct collision with notorious fact. It is pretended that the soul is unchangeable; when we have all the proof possible that it changes from day to day, and nothing but hardy denial on the other side. And if it be ever so immaterial, it still remains, that what had its beginning at birth, may have its end at death. In short, no arguments on this subject are worth listening to, but such as touch the conscience and turn on moral feeling,—on our hopes and fears,—remorse or aspirations. The doctrine of a life to come is worthless for religious purposes, except so far as the argument is religious, not physiological or metaphysical.

One other ground of fear from Materialism derives too much countenance from a prevailing doctrine of phrenologists. It is supposed that a Materialist must of course be a Necessarian, and must deny that men can be justly praised or blamed, rewarded or punished. We know that a necessarian may with logical consistency hold that it is right to punish a man, as we would whip a dog, merely because experience shews the efficacy of the motive; but although this satisfies the lower demands of economics, it no by means meets what we believe spiritual religion and sound morality to require. To hold that self-reproach and penitence is self-delusion, does appear to us a grievous and immoral error; and we regret that the Author of the *Vestiges of Creation* does not express himself more decidedly against it, when he approaches the topic. He distinctly recognises the reality of Self-Control; and therefore we hope, that if he had the opportunity of further

explanation, we should be satisfied with his view.—Having said thus much, we must add, that we cannot ourselves see any proper connection between Materialism and the doctrine of Necessity. The latter controversy is notoriously an entangling one. *Spiritual* Fatalists are not at all rare among contemplative and even devout persons; and as far as we can see, the difficulties in the way of believing in human Free Agency are equally great, and need to be met by the very same considerations, in the immaterialist as in the materialist theory. No materialist has any right to argue, that as a planet moves without power of self-control, so also must the human brain act, if its forces are merely material ones. For the pretended analogy would quite as well prove that it cannot hope and desire, meditate and reflect, as that it cannot act freely upon itself. Into such false analogies those are perhaps peculiarly apt to fall, who have studied inanimate, more than animate or rational nature: and it is hardly fair to charge on materialism, *as such*, the errors which arise out of an undue encroachment of physiology on the domain of morals. The writer before us certainly is not chargeable with the least taint of scepticism concerning the reality of ethical laws. As he emphatically says (p. 383), “An individual, a party, a people, can no more act unjustly with safety, than I could with safety place my leg in the track of a coming wain, or attempt to fast thirty days.”

Let what we have already stated be distinctly remembered, that we are not *advocating* Materialism, but simply keeping the path of inquiry open, by protecting this theory against the charge of a necessary alliance with scepticism and irreligion.

VII. *On Merit and Demerit as affected by the Doctrine of Moral Necessity.*

It has been stated as an objection to the doctrine of the Necessity of the human will, that Merit and Demerit are in direct opposition to it, and that it is only on the supposition of Free Will that these words can have any meaning, and the corresponding sentiments a legitimate existence. In point of fact, however, merit and demerit, duly analysed, themselves are found to be a part of that very system of responsibility which rests so firmly on the basis of Necessity. To shew this, let us examine in what circumstances the feeling of merit and of demerit first begins to be experienced.

Philosophically speaking, we never attach a feeling of merit or of demerit to any action done by ourselves or others, except where there has been a struggle between a higher and a lower desire, which has ended in the one case in the ascendancy of the moral impulse, and in the other in the triumph of the propensity. Thus, when an idiot, from defective development of brain, habitually indulges in the most vicious conduct, we never think of ascribing blame or demerit to him; because we know that he has no restraining power, and any feeling of that kind manifested towards him could not be productive of benefit to him or to us. In like manner, while we think of an angel with feelings of respect and admiration for the mental purity described as characterising such beings, we do not, and, from this very purity, *cannot*, connect the idea of merit with their conduct. Or, let us suppose a human being possessed of such an exquisitely proportioned development of brain, as to cause his every feeling, thought, and action, to be pure, moral, and excellent, and to render the very idea of wrong highly painful to his mind, it is clear that such a being could have no merit in doing good, and that he himself would be conscious that he was entitled to none. He would feel the pleasure of obeying the dictates of his faculties, to be in itself his highest and most delightful reward. Some, no doubt, would attribute merit to him; but they would do so under the erroneous impression that he was constituted as they themselves were, was beset with the same temptations, and had laboured successfully to resist them; and they would say, that in this resistance his merit consisted. The few, however, who examined more closely, while they would respect, love, and admire a being endowed with such qualities, would never think of ascribing merit to their possessor for acting in accordance with their dictates.

But as soon as a *struggle* between the propensities, which look to self alone, and the moral sentiments, which look to the welfare of others, terminates in favour of the latter, we say that the individual has merit; and he himself is conscious of being on that account entitled to a certain degree of praise or consideration. Two things are in harmony here. First, the action implies a denial of selfish desire, and a regard to the well-being of others; and the having accomplished this self-denial not only gratifies the moral faculties which influenced him, but gives rise to a feeling of self-merit depending mainly on Self-esteem. Secondly, the very circumstance of the good being done *to another*, by the constitution of our nature excites Conscientiousness in the object

to make a grateful return ; Benevolence to aid and do good to his benefactor ; Veneration to look up to him with respect ; and Love of Approbation to express that respect ; all which manifestations being in perfect harmony with the benefactor's own feeling of merit, gratify his Self-esteem and Love of Approbation, and operate as strong inducements or motives to him to follow the dictates of the moral sentiments on all future occasions. And hence, as mankind act always from their strongest desires, merit, and the respect shewn to it, are not only necessary in themselves, but strictly in harmony with moral necessity.

If, again, the struggle terminates in the ascendancy of the propensities, *self* is then set against society. By the constitution of our minds, neither Conscientiousness, Benevolence, nor Veneration, can look up to, respect, or sympathise with meanness and degradation. The Self-esteem of the individual is disagreeably affected by the result of the struggle, and a feeling of dissatisfaction arises ; he feels degraded, and his moral dignity diminished. His own mind is in perfect harmony with the feeling of demerit and dissatisfaction then felt by others, and hence a powerful motive to a better decision in other cases. In short, here is the responsibility which Nature has attached to his failing to obey her dictates, when she made the moral sentiments paramount in authority. Different individuals are moved by different motives, and Nature has wisely surrounded man with a variety of these, all tending to the same good end, and all giving rise to pain when not listened to or obeyed ; and in this way, even faculties whose object is exclusively selfish, are made to co-operate in leading to virtuous conduct.

VIII. *On the Hereditary Tendency to Depravity and Crime.*

By JULIUS HENRY STEINAU, M.D. of the Royal Medical College, Berlin.*

Dr Gall relates the two following remarkable cases, in which suicide occurred hereditarily. M. Gauthier, owner of several warehouses in Paris, left to his seven children a property of two millions of francs. They all remained in Paris

* From the Appendix to "A Pathological and Philosophical Essay on Hereditary Diseases. By J. H. Steinau, M.D., &c." London : Simpkin, Marshall, and Co., 1843. 8vo. pp. 52.

and its environs, where they lived upon their property, which some of them even increased by commercial transactions. Not one was visited by any material disaster, and all enjoyed the best state of health. They all had sufficient to live upon, and were highly esteemed; but every one laboured under an inclination to commit suicide, to which they yielded in the course of thirty or forty years: some hanged, some drowned, and others shot themselves. The last but one invited on a Sunday a party of sixteen persons to dine with him. When dinner was served, the host was suddenly missing; and having been everywhere called and looked for in vain, he was at last discovered hanging in a barn. Only one hour before, he had been giving orders to the servants with the greatest composure of mind, and had cheerfully conversed with his friends. The last of the seven, who was the owner of a house in the Rue de Richelieu, having raised it by two stories, at once conceived the idea that the expense had ruined him. Three times he tried to destroy himself, but was each time prevented from accomplishing it; however, he at last succeeded in shooting himself. The amount of his property, after the payment of all liabilities, was found to be 300,000 francs. He destroyed himself at the age of forty-five years.

Another case, related by Dr Gall, is the following:—A person committed suicide at Paris. His brother, who was present at the funeral, when seeing the corpse, called out, "What a misfortune! My father and my uncle have both destroyed themselves: my brother has followed their example: and I myself was, during my journey here, more than twenty times hardly able to withstand the inclination of throwing myself into the Seine."

To these facts the writer of this essay may be allowed to add a case equally remarkable; for the truth of which he can vouch, as he was highly interested in it, and is able to describe it with all its particulars.—Whilst yet in B——, in Germany, I was visited by a man whom I well knew; he was accompanied by a handsome lively youth of about eleven or twelve years of age, whom he introduced to me as the son of his sister in L——; requesting me, at the same time, that I would allow the youth to call now and then upon me, for the purpose of letting me judge of the progress he was making at school; and that I might also otherwise superintend him, since he himself (his uncle) was not competent to the first, and prevented by his avocations from undertaking the latter. He added, that his brother-in-law, the father of the youth, having been unfortunate in business, destroyed himself; and that, to ease the condition of his sister, he had resolved

to bring the boy to B——, and let him finish his education there.

I readily undertook the charge. The boy often visited me ; and, I must confess, the more I knew of him the more I was captivated by him. He was an honest, cheerful, and obliging youth ; he made daily progress in his studies ; and was beloved by all his teachers in the school. He became so dear to me, that I felt daily a necessity of enjoying his company in the evening hours. Thus passed several years, when at last the boy received the holy rite of Confirmation ; and leaving the school, he was, according to his own inclination, bound as an apprentice with a respectable tradesman ; and I soon learnt that his master had every reason to be perfectly satisfied with him. Many changes in my own circumstances were the cause that I afterwards saw this youth less frequently than before ; and, as is natural in a large city, I soon almost entirely lost sight of him, so that I had for several months neither seen nor heard any thing of him. One day, happening to be in the neighbourhood of the establishment where the youth was apprenticed, I could not help entering, with the intention of paying him a visit ; well knowing, at the same time, that it would produce an agreeable surprise. Upon my asking the master for the apprentice, he for a while looked at me with a sad countenance, and then said, "What, Sir, do you not know what a misfortune we have met with, about this boy ? He has now been two months dead and buried : he has destroyed himself." "How was this possible ?" said I, quite amazed—"this good boy ! Perhaps he had done something wrong, for which he was afraid of being severely punished ?" "By no means," replied the master, with tears in his eyes ; "on the contrary, he has always behaved in every respect so honestly, that I was delighted with him, and I loved him like one of my own children. About eight weeks ago he was, in the forenoon, occupied alone in the storehouse ; and dinner-hour having come, and the dinner being ready, he was several times called without answering ; upon which I went myself to look for him ; and there he was, hanging, by a rope round his neck, on a large hook in the wall, quite cold and stiff. There was no doubt but that he had hanged himself in an evil moment. We cannot imagine any reason that could have induced him to such a step ; and I cannot think otherwise than that he had inherited the inclination to commit suicide from his father."—The boy, at the time of his death, was not yet fifteen years old, and had not been a full year from school.

It cannot be denied that the tragical death of this youth

whose father had committed suicide, and who himself put an end to his existence in the fifteenth year of his age without any apparent cause, present indications, like those related by Gall, of an hereditary tendency or disposition to commit suicide. However, we can only draw a conditional and hypothetical conclusion.

As an example of the hereditary occurrence of moral depravities of another kind, and of their appearing sometimes as innate, we give the following fact; the parties connected with which were, like those in the foregoing case, well known to the writer.

When I was a boy, there lived in my native town an old man, named P——, who was such an inveterate thief, that he went in the whole place by that name. People speaking of him, used no other appellation but that of "the thief;" and every body knew then who was meant—for epithets, generally speaking, are of common occurrence in small towns. Children and common people were accustomed to call him by that name, even in his presence, as if they knew no other name belonging to him; and he bore it, to a certain degree, with a sort of good-naturedness. It was even customary for the tradesmen and dealers who frequented the annual fairs in this place (which are there of a more mercantile character than in other countries), to enter into a formal treaty with him; that is, they gave him a trifling sum of money, for which he engaged not only not to touch their property himself, but even to guard it against other thieves.

A son of this P——, named Charles, afterwards lived in B——, during my residence there. He was respectably married, and carried on a profitable trade, which supported him handsomely. Still, he could not help committing many robberies, quite without any necessity, and merely from an irresistible inclination. He was several times arrested and punished: the consequence was, that he lost his credit and reputation, by which he was at last actually ruined. He died, while still a young man, in the House of Correction at Sp——, where he had been confined as a punishment for his last robbery.

A son of this Charles, and grandson of the above-mentioned notorious P——, in my native town, lived in the same house where I resided. In his earliest youth, before he was able to distinguish between good and evil, the disposition to stealing, and the ingenuity of an expert thief, began already to develop themselves in him. When about three years old, he stole all kinds of eatables within his reach; although he always had plenty to eat, and only needed to ask for what-

ever he wished. He therefore was unable to eat all he had taken : nevertheless, he took it, and distributed it among his play-fellows. When playing with them, some of their play-things frequently disappeared in a moment ; and he contrived to conceal them for days, and often for weeks, with a slyness and sagacity remarkable for his age. When about five years old, he began to steal copper coins : at the age of six years, when he began to know something of the value of money, he looked out for silver pieces ; and in his eighth year he only contented himself with larger coins, and proved to be, on public promenades, an expert pickpocket. He was early apprenticed to learn a trade ; but his master, being constantly robbed by him, soon dismissed him. This was the case with several other tradesmen, till at last, in his fourteenth year, he was committed to the House of Correction. Whether that Institution was fortunate enough to correct this ill-fated youth, the writer of this essay is unable to state.

This case proves, as we have seen in the former examples with respect to the disposition to commit suicide, that the inclination for stealing had been transmitted by inheritance from the father to the son and the grandson ; just as we find physical complaints and bodily diseases propagating themselves by inheritance from one generation to another. Similar instances of an inherited disposition to some moral defect, or to some mental aberration, are not at all rare, and have been noticed by many.*

But, however striking these instances may be, still we must not be misled by them, to believe that there is an unavoidable necessity that the vices and immoralities of parents shall be inherited by their children, and that a man must necessarily become a slave to vice, and to the demons of despair, merely because he is under the fatality of being the son of a vicious or otherwise ill-fated father. Experience abounds in examples which distinctly shew the contrary in this respect, as well as with respect to bodily diseases. How often do we meet with cases† in which unhealthy parents have children who are quite the contrary throughout their whole lives. Further, we must consider, that many, if not most, individuals are, by their birth, placed in a position which opposes the greatest obstacles to the free development of their mental capacities, and often even endangers the purity of their souls. Most of those great men, perhaps, who have acquired immortality by their high services to Church and State, to Sciences and Arts, were

* Mr Frederic Hill, Inspector of Scottish Prisons, states, in his *Second and Third Reports*, that he has "found crime, to a considerable extent, running in families, and apparently hereditary."—ED.

† Exceptions, however, from the general rule.—ED.

born in circumstances environed with difficulties, but which they conquered by the strength of their own will, which made way for them through the darkness of superstition, and removed those bars which checked their course; till at last, strengthened and encouraged more and more by continual strife and attainment of victory, they obtained that position of mental independence in which the qualities of their minds could unfold themselves in their pure and shining brightness. Every man, with whatever fatal soul-endangering disposition he may have been born, is equally able to conquer the same,* by the concentrated unremitting strength of his own will, and by a deeply founded confidence in the assistance of the Almighty, the source of all that is pure and good; and thus every one is able to divest his soul of all impurity, and to let it shine in the original sanctity with which it streamed forth from the Divine source:—and, therefore, every man also remains accountable for his own bad actions; for they are not the unavoidable consequences of necessity. The simple, sincere, and earnest belief in God drives away all thought of sin: but to forget God, or never to have known him, this it is which throws man into the arms of sin and despair.

II.—NOTICES OF BOOKS.

- I. *Zeitschrift für Phrenologie*. No. VII. Heidelberg: Karl Groos, 1844.
The German Phrenological Journal. No. VII. Sept. 1844.
 Edited by GUSTAV VON STRUVE and EDWARD HIRSCHFELD, M.D.

The first article of this Number is the conclusion of Dr Hirschfeld's paper on "the Laws of the Nervous System considered in relation to Phrenology." After discussing the spinal column, and the nerves of motion and feeling, he proceeds to observe, that "the cutting through of the pons Variolii, as also of the middle nervous bundles proceeding to the cerebellum, produces, in the lower animals, movements in the form of a circle round their own axis. Similar circular motions ensue on cutting the large crura of the brain. Longuet and Lafargue have shewn, by their experiments, that these circular motions are always directed towards the injured side. Magendie, who maintains the opposite proposi-

* No phrenologist will admit the soundness of this statement. Experience tells a totally different tale. Dr Steinau himself speaks of the "irresistible inclination" of Charles P—— to steal. A short communication on this subject will be found among the articles of "Intelligence" in a subsequent part of our present Number.—Ed.

tion, viz. that they are directed to the uninjured side, appears to have been too hasty in his observations. The wounded animal first sinks down on the injured side, and then commences turning round on this side, as its axis, with great celerity of motion. How are these phenomena to be accounted for, in contradistinction to the simple result of laming, which ensues on cutting the deep-lying portions of the spinal cord? In my opinion, the cause of the difference is this,—that fibres from the cerebral ganglia enter into the structure of the crura and pons Variolii, and, like the nerves of motion and feeling in the spinal cord, there interlace with each other, with a view to their combined action by means of the grey matter. The pons Variolii contains grey matter all through its structure, and with it encircles the crura. It thus presents the conditions necessary to an interchange of functional communications. The section of these parts, therefore, is no longer limited to the nerves merely of sensation and motion; but injures and excites also fibres which stand in closer connection with the mental functions. In consequence of this connection, involuntary mental action accompanies the excitement of these parts, and this mental agitation communicates the impulse to muscular action to those parts of the body which, after the cutting, still remain under the influence of the mental functions. The involuntary mental action excited by cutting the cerebral fibres may consist of fear, of desire to oppose, to escape from the danger, or of any other emotion which impels to muscular motion; and it is this which causes the animal to exhaust itself in vigorous muscular efforts by means of the limbs still under the influence of the will. The muscles of the uninjured side are stimulated into powerful action, while those of the injured side are entirely disabled. The former strive to move in the forward direction; but as this motion is confined to one side, the circular movement round the axis of the injured side is an inevitable consequence. On the other hand, when the nerves of motion are divided, in parts where they are not interwoven with cerebral fibres, no such excitement of the mental functions takes place; these, therefore, do not act involuntarily on the uninjured portions of the spinal marrow, and the animal lies simply disabled, without endeavouring to execute movements which are inadequate to accomplish their object."

These views may be regarded as hypothetical; but Dr Hirschfeld acutely and justly remarks, that one great deduction from the value of experiments performed on the lower animals is the inability of those creatures to describe their

sensations ; from which circumstance it is impossible to ascertain accurately to what extent their movements, produced by vivisections, arise from muscular irritability, from sensations of pain, or from mental agitation acting voluntarily or involuntarily on the motor column. Only from man can we learn with precision the effects produced by injuries of particular parts of the cerebrum ; for he alone can distinguish and convey by speech clear ideas of what mental powers he has lost, and what he retains ; what he feels, and what he does not feel ; and to what extent he retains, or has lost, the power of motion.

Dr Hirschfeld adds the remark, that those physiologists who reject Phrenology, advance nothing beyond hypotheses regarding the functions of the different portions of the cerebrum ; and that, from the great differences of opinion prevailing among them, it is obvious that, on this subject, no one of them has confidence in the conclusions of another. He demonstrates, that by no other method than that pursued by Dr Gall, is it possible, so far as experience has yet extended, to discover the functions of the different cerebral parts.

The second article of the Journal is a continuation of George Combe's letters on the application of Phrenology to the Fine Arts, which have already appeared in our pages.

The next article is entitled, "Phrenology Considered in Relation to the Church," by Mr Von Struve. He remarks, that in our day it becomes more and more evident that little can be effected by the application of mere physical force to the human mind, and that hence it is proportionately necessary for those who aim at influencing the public will, either in large or narrow spheres, by moral means, to study Phrenology. It is the science of human nature which teaches us the manner and means by which men must be acted on, if we expect to succeed in leading their minds towards wisdom and virtue. In this point of view, Phrenology is of great importance to the clergy. He describes the division of the brain into the regions of the animal propensities, the moral sentiments, and the intellect, and proceeds :—"Man exists in a twofold world,—the inner world of his own thoughts and emotions, and the outer world of physical and animated beings. The one of these corresponds and is adapted to the other." "The organ of Causality impels men to inquire into the causes of the various phenomena of life." "By this means we arrive at a conviction of a First Cause—at God—whose existence those only will deny in whom Causality is in an abnormal condition. The higher sentiments of our souls, on the other hand, will impel us to connect our inner being

more closely with the Godhead, to adore Him, and to trust in Him.

“The two great provinces of the Church are those of morals and religion. Let us first advert to that of morals. The obscurity and contradiction which have hitherto prevailed in matters of faith, have also spread their baneful influence on morals. Teachers have strayed from nature.” “The organs on which morality rests are Benevolence and Conscientiousness, acting in harmony with an enlightened intellect. These cannot be exercised by mere words, or precepts, but by scenes and actions in which their activity is involved.” “So long as the animal propensities and the inferior sentiments play so great a part in our lives as they now do, it is impossible for Benevolence and Conscientiousness to produce practical effects. In our schools and institutions for education, the teachers content themselves with giving instruction in morals; that is, they speak to their pupils about morals, they explain to them works on morals, and recommend to them a moral life. Our youth, generally speaking, learn nothing more than this instruction communicates,—namely, to speak, when occasion requires, on moral subjects, to explain works on morality, and to admonish others to live virtuously. In consequence of this method of teaching, morals remain in the domain of theory, and do not bring forth practical fruits in social life. On the other hand, the enticements of fashion, the love of wealth, and the dictates of a false honour strike in practically, and act so powerfully on the youthful mind, that no merely theoretical morality is capable of contending successfully with all these realities.

“Many complaints are made of the depraved morals and unproductiveness of our age. Both, although appearing different, have nevertheless the same cause,—namely, deficiency of moral power. The moral sentiments do not sufficiently restrain the animal propensities, and hence arises laxity of morals; and they do not adequately warm and excite the intellect, and hence comes the deficiency of practical goodness and usefulness. In our day, intellect has been carried to a high point, but which only renders its hollowness, when separated from morality, the more conspicuous. It has become the servant of vice, and of every inferior propensity, and has failed to fulfil the expectations formed of it. Intellect, as the executive power of the moral sentiments, becomes as conspicuously useful as it is injurious when the handmaid of the propensities. There is nothing so low and so worthless that intellect will shrink, in our day, from defending. As it defended slavery, gladiatorial combats, and unnatural practices, •

in ancient times, so it steps forward, in our day, to justify falsehood on the great scale, prostitution of the mind, debauchery of the body, over-strained pretensions of luxury and fashion, and the requirements of a false honour." We should say that, in this country, and we hope in Germany also, morals have made so great an advance that reason no longer defends such practices as right, but merely apologizes for them as inevitable. Mr Von Struve proceeds:—

"The foundations of true religion are the sentiments of Veneration, of Hope, and of Wonder, acting in harmony with enlightened intellect. These sentiments cannot be excited and nourished by learning religious precepts by heart, or by flexions of the body. The aspect of the great in nature and in history, and the direct works of God, are the proper and efficient excitants and food of these emotions. The view into futurity and a fairer and better world animates Hope, and the great secrets of nature call forth our admiration." "Trust in God, the love of Him, and strenuous endeavours to act according to his will, are the evidences of religious emotion."

The fourth article is a communication on Phreno-Magnetism drawn from the English journals.

The fifth article consists of an answer by Mr Noel to Volkmann's objections against Phrenology, published in Dr Rudolph Wagner's *Handwörterbuch der Physiologie v. Gehirn*. The only interest attending Professor Volkmann's objections, is the evidence they afford of the similarity of the working of the human mind in different countries in similar circumstances. Moralists have often remarked, that the great majority of individuals are more influenced in their habitual conduct by social opinion (Love of Approbation), than by either moral or religious principles (Conscientiousness, Benevolence, or Veneration). In science, the same fact holds equally good. Scientific and literary men who write for the press, appear to be directed towards truth and utility much more by their fear of an enlightened and critical public, than by a just regard for these objects on their own account. No man of average understanding will write on Chemistry, Anatomy, Physiology, Botany, or Geology, without some reasonable knowledge of the subject; but if we may judge from the conduct of Dr Gordon the Edinburgh Reviewer of Phrenology, of Dr Barclay, Dr Roget, Dr Rudolphi, Dr Volkmann, and many others, who have written well on sciences which they understood, it is clear that such men, when not writing for an instructed public, will not hesitate to discuss subjects invested with a popular interest from their novelty,

without any accurate knowledge or serious study of them whatever. We are led to infer that it was their own professional acquirements, and the fear of detection and loss of reputation, that led them to truth and reason in their own departments, while they proceeded confidently and recklessly to set both at defiance when addressing an uninformed public on the subject of Cerebral Physiology. Dr Volkmann does so precisely what these previous authors had done, viz., mistakes and misrepresents Phrenology, and so much in the forms and terms, that one would almost infer that he had borrowed his objections from them, and reproduced them in utter unconsciousness that they had been answered, pronounced by the public to be untenable, and given up by every inquirer, except the single individual himself who produced them. Mr Noel answers Dr Volkmann's remarks ably and temperately; but we venture to say, that if any one would take the trouble to translate the objections, and place beside them those already discussed in our Journal, our readers would be amused by the coincidence. If Professor Volkmann had conceived that he was addressing a public as well informed in regard to Phrenology as the readers of this Journal in general are, he would no more have printed such lucubrations as those before us, than he would have misrepresented, combated, and denied the generally received doctrines concerning the functions of the anterior and posterior columns of the spinal cord. He advances not only erroneous representations of facts and principles, but gravely urges downright contradictions of his own propositions, as arguments against Phrenology. For example,—He first lays it down as an admitted truth, that “in the higher classes of animals, the brain is the exclusive organ of the mind, the seat of the passions and the affections; and that the brains of man and of the vertebrated animals present an analogical process of development, in virtue of which the brain in the higher order of animals, and still more decidedly in man, attains the greatest degree of development, while the inferior orders remain at the bottom of the scale.” “The more,” he adds, “we descend from man into the lower grades of animal life, the brain, in its earlier embryotic forms, is more and more deficient.” If these words have any meaning, they express the law as a general one, that the larger the quantity of brain, the greater is the extent of mental power in the various classes of animals. Nevertheless, he, in the next place, proceeds to state, as an objection *against Phrenology*, “that the brains of apes present the greatest similarity to the human brain, while elephants, horses, and dogs are not inferior to apes in their mental capacities;”

that "the brain of the dolphin is extremely well developed without being accompanied by great talents, while the brain of the skilful and tameable beaver remains very little expanded." Our readers are familiar with the answers to these objections, viz., that the object of Phrenology is to discover the functions of the *particular parts* of the brain, and that this end cannot be attained by comparing the *absolute* size of the brain with the mere *aggregate mental qualities* either in man or animals; farther, that Phrenology is founded on observations of the relation existing between *particular parts* of the brain and *particular mental powers in man*, and, therefore, can neither be overturned nor proved by general observations on the brains of the lower animals; thirdly, that in studying *comparative* Phrenology, the observer must compare *particular parts* of the brains of the lower animals with the particular instincts manifested by them, before he can draw any useful conclusions; and lastly, that it is only after the functions of the particular parts of the brain in man, and those of the particular parts of that organ in each species of animals, have been ascertained by these or some other legitimate means (if any such exist), that the two can be profitably compared and sound deductions made. All this has been stated again and again, and supported by multiplied arguments and illustrations in the standard works on Phrenology; but Dr Volkmann, apparently through sheer ignorance, omits all reference to such principles, and advances the statements before alluded to as his weightiest objections. They not only do not in the least touch upon the merits of Phrenology; but they are self-contradictory. If the general fact be, as he states it, that the more the brain is developed the higher are the mental powers of animals, including man, how does *he* reconcile with this law, his alleged instances in which large brains are present with slender mental capacities? He either does not perceive the inconsistency of his own statements, or, intent only on assailing Phrenology, he is disposed to wield every weapon against it, even although it should be a two-edged sword that cuts in pieces his own propositions as well as those of his opponents.

His blindness to logical consequences is apparent in another of his objections. He says that "the *thickness* of a book, *cæteris paribus*, may as well be given as an index of its worth, as the size of the brain, *cæteris paribus*, be stated as the measure of its energy." Mr Noel is not so successful in answering this, as in dealing with several others of his remarks; the short reply is—that the case is even so—it is exactly as he states it. If *all* other conditions be equal, a

volume of two hundred pages is more valuable than a volume of one hundred ; or six of the best books of Homer's Iliad are more valuable than *three* ; or ten of the best plays of Shakespeare are more valuable than five. If you say that three of the best are worth more than five of the worst, this is granted ; but here the condition *cæteris paribus* does not apply.

This number contains a variety of shorter articles which are interesting to the German reader, but do not afford matter for particular comment here.

II. *On Superstitions connected with the History and Practice of Medicine and Surgery.* By THOMAS JOSEPH PETTIGREW, F. R. S., &c. London: Churchill, 1844. 8vo, pp. 167.

The subjects here treated of by Mr Pettigrew are Alchymy, Astrology, Early Medicine and Surgery, Talismans, Amulets, Charms, the Influence of the Mind upon the Body, the Royal Gift of Healing, Valentine Greatrakes' Cures, and Sympathetical Cures. The details given, are, for the most part, of merely antiquarian interest ; but some of them exemplify very well the strong effects of faith, hope, and other mental emotions, in the cure of diseases. The chapter on "the Influence of the Mind upon the Body," is, in our opinion, the most valuable portion of the volume. Its motto is the sentence of Dr Reid, that "Medical cannot be separated from Moral Science without reciprocal and essential mutilation." To the same effect is the following quotation made by Mr Pettigrew from Plato:—"The office of the physician extends equally to the purification of mind and body ; to neglect the one is to expose the other to evident peril. It is not only the body that, by its sound constitution, strengthens the soul ; but the well-regulated soul, by its authoritative power, maintains the body in perfect health." Sir A. Crichton, in like manner, observes, that "the passions are to be considered, in a medical point of view, as a part of our constitution, which is to be examined with the eye of a natural historian, and the spirit and impartiality of a philosopher."

As confidence in the influence of charms and amulets is in proportion to the ignorance and superstition of the patient, their efficacy among European nations is now much less than it was in earlier and less enlightened times. But the faith and hope inspired by other means are still found to aid most essentially the efforts of the physician. The cures

which followed the application of Perkins's metallic tractors, and the well-known case in which a paralytic patient, who mistook for a curative agent the thermometer placed under his tongue by Sir Humphry Davy, are referred to as illustrations; and the following example is not less remarkable. "Professor Woodhouse, in a letter to Dr Mitchell of New York, has given a recital, which also tends to shew what singular effects can be caused if the imagination be previously and duly prepared for the production of wonders. At the time that nitrous oxide excited almost universal attention, several persons were exceedingly anxious to breathe the gas; and the professor administered to them ten gallons of atmospherical air, in doses of from four to six quarts. Impressed with the idea that they were inhaling the nitrous oxide, quickness of the pulse, dizziness, vertigo, tinnitus aurium, difficulty of breathing, anxiety about the breast, a sensation similar to that of swinging, faintness, weakness of the knees, and nausea, which lasted from six to eight hours, were produced—symptoms entirely caused by the breathing of common air, under the influence of an excited imagination." In a treatise on tonic agents, by Dr A. T. Thomson, these are expressly divided into mental and material. "With regard to the first," says he, "experience has demonstrated that *confidence* and *hope* are powerful tonics. Every practitioner who has had many years' experience, knows well the paramount importance of confidence in the treatment of diseases, and the great advantages derived by gaining ascendancy over the mind of a patient. In the same manner, *hope* operates as a powerful tonic. Deprive a patient of this solace, even after his disease is removed and debility alone remains, and there can be no solid assurance of his recovery to perfect health; inspire him with the hope that his recovery is certain, and the prognostic will seldom fail to be realized. It is much easier to demonstrate the power of these mental agents than to explain their mode of action."—(*Cyclopædia of Practical Medicine*, vol. iv., page 683).* And in the

* "We shall give," says a late writer, "two cases, which came under our own observation, which, we think, will illustrate the effect of the mind over disease. One was a case of hysteria, that of a young lady, who had lost the use of her lower limbs in consequence of the hysterical affection, and had not been able to walk for a long period. Having been recommended change of air and scene, she merely went, for a short time, on a visit to an agreeable family of her acquaintance, and quickly recovered. The other was that of a gentleman, who was seized with hemiplegia of the right side from apoplexy: after having been for some time submitted to treatment, he recovered the use of the lower extremity, but his arm continued for some time paralyzed. One morning,

article STIMULANTS, in the same work, Dr Thomson says: "Some consideration is due to mental stimulants, which are too much overlooked by the physician. The effects of all the exciting passions closely resemble those that follow the impression of a powerful material stimulant; the action of the heart and arteries is suddenly augmented; the animal temperature is elevated; perspiration flows freely, demonstrating the direct influence on the capillaries; the face glows; the eyes sparkle; and the respiration becomes quicker and fuller. The mental functions of the brain are not less excited than those of the body: the imagination takes a more excursive range; the pleasurable scenes of former life are again presented to the memory; the future teems with gay and delightful anticipations; every task seems easy, every labour light; whilst the most difficult and momentous schemes appear already accomplished, and crowned with the most brilliant success. But, besides these effects, the excitement of some passions, especially *joy*, quickens the corporeal sensibility; every object makes a stronger impression on the organs of sense; the eye sees more distinctly, the ear is more acutely alive to sounds, the taste and the touch are delicately sensitive, and every bodily movement is more prompt and energetic. The condition of the habit in which the exciting passions, particularly joy, may be employed as a remedy, is that which is characterized by languor and debility, in such diseases as melancholia, hypochondriasis, dyspepsia, and chlorosis; and many cases might be detailed to display their beneficial influence on those afflicted with those diseases.—(Lory, *De Melancholia*, tom. i., p. 57. —Trallianus, lib. ix., p. 17.) The application, however, of such agents requires the utmost judgment and discrimination: a sudden impulse of joy has made so powerful an impression on the nervous and irritable frame of delicate persons as to produce epilepsy, and even death. The influence of mental excitants in such cases, like the stroke of a flash of lightning, whilst it illuminates, destroys its victim.—(Haller's *Physiology*, vol. v., p. 501.) The knowledge of this stimulant influence of mind on body, is also important in pointing out to the student and inexperienced practitioner, the necessity of guarding those weakened by disease from indulging in impetuosity of feeling, whether during the pro-

however, a friend to whom he was much attached, and whom he had not seen for some time, unexpectedly visited him; by a sudden effort of the will, he extended his right arm, which had been previously paralyzed, to shake hands with him, and ever since retained the use of his arm."—*Dublin Journ. of Med. Science*, March 1845, p. 113.

gress of the malady or in convalescence. The fatal consequence of such a state of excited feeling was once witnessed by the writer of this article. A gentleman in the advanced stage of phthisis was visited by an old friend, whom he had not seen for many years; the conversation turned upon an event in which the poor invalid felt deeply interested; in relating it he became greatly excited, rose from his seat, and displayed an unusual impetuosity of manner; and he had scarcely concluded the narrative ere he sank into his chair, and instantly expired.”—(*Cyclop. of Prac. Med.*, iv. 81.)

Mr Pettigrew cites many instances of extraordinary changes produced upon the body by passions and sudden emotions. Jaundice has been caused by violent anger and grief; fear has repeatedly changed, in a few hours, the colour of the hair from black to white or grey; an approach to the door of a dentist has often banished toothach; fright has cured ague, gout, and other disorders of a periodical character, has restored paralysed limbs to action, and checked hæmorrhages in an instant. A deaf girl in the vicinity of Wurzburg, regained her hearing when made acquainted with the sudden death of her father;* and every one has heard of the treatment proposed by Boerhaave to restrain imitative epilepsy by branding with a hot iron the next who should be affected. A malefactor who expected decapitation fell down dead when his neck was hastily struck with a cold wet cloth; and another, who received a pardon after his eyes had been covered on the scaffold, was found dead when the bandage was removed. The effect of fear in counteracting the best efforts to relieve injuries is well known to the experienced surgeon: Sir Astley Cooper says that he has often known patients de-

* Dr Wigan, in his work on the Duality of the Mind, p. 377, says—“There is a story of a youth whose tongue was suddenly unloosed at the sight of impending danger to his father, and doubt is often expressed as to the reliance to be placed on its truth. I can cite a parallel case. An export-merchant in the present day, whose immense establishment is one of the most conspicuous and remarkable in the City of London, (and who consulted me, professionally, many years), had a son, about eight years of age, perfectly dumb, and the family had abandoned the hope that he would ever be endowed with the gift of speech. There was no defect in intellect, nor lesion of any other faculty. In a water-party on the Thames, the father fell overboard, when the dumb boy called out aloud—‘Oh, save him! save him!’ and from that moment spoke with almost as much ease as his brothers. Two of my intimate friends were present at the miracle, which was the subject of unbounded joy and congratulation. The young gentleman is now one of the most active and intelligent members of his father’s firm.” It is difficult to understand how articulation could be so well performed, without any previous practice.

clare, after an accident, that they were sure they should not recover, and they seemed to be deprived of all restorative power. In like manner, it is the fearful who are most liable to be seized with contagious diseases. Convulsions, epilepsy, madness, idiocy, and sudden death, have all been caused by terror. "Mental depression," says Sir James Clark, "holds a very conspicuous place among those circumstances which diminish the powers of the system generally, and often proves one of the most effectual determining causes of phthisis. Disappointed hopes which have long been cherished, slighted affections, loss of friends, and reverse of fortune, exert a powerful influence in inducing phthisis in persons predisposed to the disease."—(*Cyclop. of Prac. Med.*, iv. 321.) Cases of death from sudden joy as well as terror abound in the writings of the ancients, and are attributed by Mr Pettigrew to the effects produced by means of the nervous system acting chiefly upon other organs, particularly those which appertain to the sanguiferous system, where either disease or a strong predisposition to it had previously existed. "Most of the cases of sudden death," says he, "which now occur—and they have been lamentably numerous of late—are shewn by dissection to arise from disorder of the heart or its large vessels. Some years since, it was customary to refer any case of sudden death to apoplexy, and at an earlier period to the effects of fear, joy, or other violent passions." He remarks in a note, that the mind appears to sympathise more with certain portions of the body than with others. Mental excitement quickens the circulation, and occasions the heart to palpitate, that is, to beat quickly and tremulously; and in cases where disease of that organ exists, the effects are sometimes fatal. "Next to the heart, the organs of digestion seem most susceptible of the effects from mental emotions; and an ingenious writer, Mr Fletcher of Gloucester, has ventured to designate the effect of the passions upon the stomach as a 'Mental Indigestion,' in contradistinction to that dyspepsia which arises from physical causes. Fear, as already stated, produces its most decided effects upon the heart; and it is the especial condition of all who have disease of this organ to be under continual apprehension and dread. Irritability of temper is always consequent upon disorder of the liver and digestive organs. Voltaire knew this well when he said, 'Quand vous avez le matin un grâce à demander à un ministre ou à un premier commis de ministre, informez vous adroitement s'il a le ventre libre; il faut toujours prendre mollia fandi tempora. Personne n'ignore que notre caractère et notre tour d'esprit dépendent absolument de la garde-robe. Il y

a une grande analogie entre nos intestines et nos passions, notre manière de penser, notre conduite.' Dryden and other eminent authors have not been insensible to the necessity of healthy alimentary function to the free exercise of mental power." Here we may borrow a passage from Dr T. J. Todd:—"Sweetness of temper, clearness of intellect, vigour of understanding, correctness of judgment, firmness of character, power of self-control, are preserved by a healthy state of the digestive organs, and may be lost by their disorder; for, as it is by the diseases of these organs that intemperance works its mischief, all that sages, all that philosophers have delivered in praise of the virtue of temperance, may, without stretching a point, be fairly predicated of the healthy state of the function of digestion. When will legislators stoop to consider, or when shall legislators be made to comprehend, the influences of physical causes upon moral conduct?" (*Cyclop. of Prac. Med.*, ii. 670.) Dr Macculloch humorously maintains that courage is dependent on the state of the stomach; and to a certain extent he is right. "If there is an organ of courage," says he, "which I know not that Dr Spurzheim has yet determined, it must be something like a barometric tube, subject to ups and downs and vacillations. On shore we know nothing of all this; unless perchance in fighting. But that is a bad test, as it only occurs now and then. He, on the contrary, whose life hangs on the top of a wave, or on a rope's-end, every day and all day long, can trace the vacillations of the mercury in his machine with the most delicate nicety. He can feel when he is as bold as a lion and as timid as a weasel; and he will often wonder too, why he should be either the one or the other. Whatever philosophy he may adopt on this subject, he will, at any rate, not conclude that the seat of courage is in the heart, as boxers and poets think, nor in the brain, as the modern phrenologists will determine. 'Whatever they maintain, of Alma in the heart or brain, depend on it, and let me tell ye, the seat of courage is the belly.' Hence it unquestionably is, that even the school-boy says he has no stomach to fight. It is fearful work, in a boat and in squally weather, before breakfast; and still worse at night, after having been out all day without even a biscuit; but let one be discovered in some forgotten pocket, or a lump of cheese in the corner of the locker, and immediately we all become brave as game-cocks, and the squalls and the seas are forgotten. Why else are these very game-cocks fed on beef, as the ancient Athletæ were; and why will 'one Englishman beat five Frenchmen at any time?' 'C'est le rost bif;' and if Monsieur

Basimecu' does not fight, it is only when he has soupe maigre for all diet. Our courage is all in the keeping of Archæus, depend upon it. Hence it is variable."—(*Letters on the Highlands of Scotland*, ii. 145.)*

Mr Pettigrew quotes from the "Medical Observations" of Dr Erdman of Dresden, an account of a curious phenomenon which that physician witnessed in a boy of a delicate complexion, light hair, and a sanguine temperament. Whenever this boy fell into a passion, one half of his face would become quite pale, while the other was very red and heated, and these two colours were exactly limited by a line running down the middle of the forehead, nose, lips, and chin. When he had heated himself by any violent exercise, the whole face

* "A man who brags regarding himself that whatever he swallows is the same to him, and that his coarse palate recognises no difference between venison and turtle, pudding, or mutton-broth, as his indifferent jaws close over them, brags about a personal defect, the wretch, and not about a virtue. It is like a man boasting that he has no ear for music, no eye for colour, or that his nose cannot scent the difference between a rose and a cabbage. I say, as a general rule, set that man down as a conceited fellow who swaggers about not caring for his dinner. Why shouldn't we care about it? Was eating not made to be a pleasure to us? Yes, I say, a daily pleasure: a sweet solamen: a pleasure familiar, yet ever new; the same, and yet how different. It is one of the causes of domesticity: the neat dinner makes the husband pleased, the housewife happy, and children consequently are well brought up and love their papa and mamma. A good dinner is the centre of the circle of the social sympathies: it warms acquaintanceship into friendship: it maintains that friendship comfortably unimpaired: enemies meet over it and are reconciled. How many of you, dear friends, has that last bottle of claret warmed into affectionate forgiveness, tender recollections of old times, and ardent, glowing anticipations of new. The brain is a tremendous secret. I believe some chemist will arise anon who will know how to doctor the brain as they do the body now, as Liebig doctors the ground. They will apply certain medicines, and produce crops of certain qualities that are lying dormant for want of intellectual guano. But this is a subject for future speculation: a parenthesis growing out of another parenthesis. What I would urge especially here is a point which must be familiar with every person accustomed to eat good dinners, namely, the noble and friendly qualities that they elicit. How is it we cut such jokes over them? How is it we become so remarkably friendly? How is it that some of us, inspired by a good dinner, have sudden gusts of genius unknown in the quiet unfestive state? Some men make speeches, some shake their neighbour by the hand, and invite him or themselves to dine. Some sing prodigiously; my friend Saladin, for instance, goes home, he says, with the most beautiful harmonies ringing in his ears; and I, for my part, will take any given tune, and make variations upon it for any given period of hours, greatly, no doubt, to the delight of all hearers. These are only temporary inspirations given us by the jolly genius; but are they to be despised on that account? No. Good dinners have been the greatest vehicles of benevolence since man began to eat."—*Colburn's Magazine*, 1844.

became equally red. Do not these facts seem to indicate that only one of the cerebral hemispheres (or the brains, as Dr Wigan would say) was excited during the passion ?

Hysteria and epilepsy have been frequently induced in persons of a nervous temperament by mental irritation, of which occurrence Mr Pettigrew relates several instances. He concludes the chapter with the following remarks :—

“ The consideration of such cases as those now referred to should lead all who practise medicine to look particularly to the mental condition of their patients. There is no subject of greater importance to the medical man, as well as to the philosopher in general, than the consideration of the influence exerted by the mind upon the vital functions of the body. The operation of the moral feelings and emotions in the production of corporeal disease, is far from being yet understood. I have but briefly touched upon it in these pages, as a means of explaining many circumstances which have been formerly attributed to miraculous and supernatural causes ; and I have given evidence only of those stronger and more remarkable cases or events which have appeared to me to shew most conspicuously the connection I have endeavoured to point out. The minuter shades of disease produced by mental condition would, however, form a topic of vast interest and importance to the medical philosopher, and it is very much to be regretted that so little attention has hitherto been paid to the subject. Research in such a field of inquiry, I doubt not, would display many phenomena which, in ancient times, were attributed to celestial or supernatural agency, and latterly, to magnetic and other causes, which might be satisfactorily referred to the operations of the nervous system, without the supervention of other agency. The *modus operandi* is not understood, and the opinions entertained by physiologists are various. Bichat contended, that Grief, Anger, Dread, and Melancholy all acted not upon the brain, but upon the heart and the organs of the circulation, and that whatever lesion in the brain or nervous system could be discovered, was dependent upon the intermediate influence of the heart. The influence of the passions, in modifying the nutritive processes, is indeed very remarkable, and has been characterized in ordinary language. Thus we constantly hear of ‘ pining with envy,’ being ‘ gnawed by remorse,’ or ‘ wasted by melancholy.’ Hence, it will be seen how essential it is that medical practitioners should attend with patience to the recital of the maladies of those by whom they are consulted, and cheer their depressed spirits by sympathy and consolation. This can be done without any

sacrifice of character, or abatement of self-respect and independence.

“ The instances I have cited are sufficient to shew the power of the mind over the body, and the influence it exercises in health and in disease. To apply them to the cases in which charms, &c. have been employed, we must look at the character of the diseases, and we shall not fail to find that all, or nearly all, are such as to be especially under the influence of the nervous and sanguiferous systems. I have no intention of explaining all the narratives I have given in this manner. That would be impossible, and the attempt ridiculous; for I hold with Southey, that ‘ there is no truth, however pure, and however sacred, upon which falsehood cannot fasten, and engraft itself thereon.’

“ The charms for agues, and the cures vouched for, we have already seen are most numerous. They are, perhaps, to be attributed to the operation of fear or horror, occasioned by their odious and disgusting nature, being composed of spiders, toads, and lizards; or to the confidence reposed in the pomp and ceremony of a magical process, by which tone is imparted to the system.

“ The hope entertained, by the possession of a charm, to avert pestilence, may have operated, in many instances, so as to counteract the taking of the plague, for which disease such numerous amulets have been found.

“ Hæmorrhage is known to be suppressed by fright, which throws back the blood from the extreme branches to the larger vessels about the heart. Syncope produces the same effect.

“ Epilepsy and the other nervous disorders have frequently been produced by fright, and are especially under the control of mental emotions. Hysteria may be considered in the same point of view. The relief afforded in these cases, and in others of a convulsive nature, by relics of saints, charms, &c., can only be attributed to the prepossession entertained of their efficacy in curing the disease.

“ Hiccup is a convulsive action, and commonly checked by effecting surprise or alarm.

“ The cures attributed to Prince Hohenlohe were all cases of a nervous character,—palsy, lameness, defect of sight, &c. Dr Pfeuffer, the directing physician of the Universal Hospital of Bamberg, in his *Psychological and Medical Researches* respecting these cases (See Horn's *Archives* for 1822), asserts that they were all chronic disorders, not one of an acute character. The cures were undertaken without ostentation or mystery, nor was there any particular manipulation exer-

cised. The zeal and energy and self-confidence of the prince increased with the various cases that pressed upon him, and the crowd of applicants participated with him in the feeling and excitement. In short, all miraculous cures are of the same description; the disorders are similar, and the effects described are precisely the same. It is faith which works the miracle, and in the Hohenlohe cases depended entirely upon the degree of religious feeling or enthusiasm entertained by the sick.

"In the Journal of George Fox (vol. i., p. 103, edit. Lond. 1794), a case of lameness, suddenly relieved by an unexpected address under a state of religious ecstasy, is thus recorded:—'After some time I went to a meeting at Arnside, where Richard Mayer was. Now he had been long lame of one of his arms, and I was moved of the Lord to say unto him, amongst all the people, Prophet Myer, stand up upon thy legs (for he was sitting down); and he stood up, and stretched out his arm, that had been lame a long time, and said, Be it known unto you, all people, that this day I am healed. But his parents could hardly believe it; but after the meeting was done had him aside, and took off his doubt, and then they saw it was true. He came soon after to Swarthmore meeting, and there declared how that the Lord had healed him. Yet after this the Lord commanded him to go to York with a message from him, and he disobeyed the Lord; and the Lord struck him again, so that he died about three quarters of a year after.'

"An attentive consideration of the various sympathies would, I doubt not, enable us to explain many of the phenomena that have been recorded, and which, without a due knowledge of the human economy, may justly be looked upon as of a miraculous nature."

III. *Elements of Phrenology.* By GEORGE COMBE. Sixth Edition. Edinburgh: Maclachlan, Stewart, & Co.; and Simpkin, Marshall, & Co., London. 12mo. Pp. 223. 1845.

In this edition, Mr Combe has added a chapter on the "Relations between the structure and functions of the brain;" in which the connexions of the brain with the spinal cord and nerves are expounded, and the cerebral structure of man is shewn to be in harmony with his actions, which are here divided into reflex, sensational, instinctive or emotional, and voluntary. The subject is so interesting, that we shall pro-

bably devote an article to it in a future Number ; contenting ourselves in the mean time with referring to the work under notice, and to a correspondence lately carried on by Mr Combe with Professor Reid of St Andrews and Dr Laycock of York, “ on the Reflex Anatomy and Physiology of the Brain,” and which is published in the *Lancet* of 30th August 1845, and several following Numbers. Professor Reid, we observe, has supplied Mr Combe with an abstract of Foville’s description of the anatomy of the brain ; it is inserted in the present edition of the *Elements*.

IV. *The Power of the Soul over the Body, considered in Relation to Health and Morals.* By GEORGE MOORE, M.D., Member of the Royal College of Physicians, London, &c. &c. London : Longman & Co. 1845. Post 8vo. Pp. 305.

Dr Moore is evidently a philanthropic and amiable man, and his book contains many sound and useful doctrines ; but as a writer he wants precision and method, and in some of his chapters mixes up physiology with theological and fanciful speculations, which detract materially from the value of the work, and tend greatly to lower in our estimation his character as a philosopher. These remarks apply especially to the first half of the volume, which, it appears, “ was written several years since, during the unwelcome but valuable leisure of disease, for the purpose of being addressed to a few young men ;” but which, when addressed to the public at large, ought on that account to have been re-written, and not only brought into harmony with more advanced physiology, but rendered more consistent with itself. As the work now stands, Dr Moore at one time speaks of the fallen state and “ disordered nature” of man, and at another represents the human race as endowed with noble qualities which are incompatible with the corrupt state in which he theoretically holds us to exist. Materialism he regards with extreme horror—principally, it seems to us, because, like many other really intelligent persons who have not bestowed due consideration on the subject, he believes, on the one hand, that immortality is incompatible with materialism, and, on the other, that it is certainly deducible from immaterialism. Both notions we humbly conceive to be ill-founded, for reasons which have been sufficiently given on former occasions. (See p. 333 of this Number ; also vol. xv. p. 348, and vol. xvi. p. 60.) In holding that Scripture is an authority in science,

Dr Moore shews himself to have lagged behind the age ; and his idea that we have that " highest authority " for believing " that many spirits may occupy and employ the same body " (p. 293), may well excite a smile.

Throughout Dr Moore's volume many examples are given of the mutual influence of the mental and the digestive, respiratory, and other functions ; but they might be equally adduced as proofs of the power of the body over the soul as that of " the soul over the body." Having already, in our present Number, dwelt at some length upon this subject in noticing a work by Mr Pettigrew, we shall merely add, that although it would have been satisfactory to see fewer outrages on philosophy in Dr Moore's treatise, we are comforted by the reflection, that many useful physiological truths may be disseminated by its means in quarters which otherwise they were not likely to reach.

III. INTELLIGENCE, &c.

Lectures on Phrenology.—In June and July, Mr C. Donovan delivered a course of nine lectures in *Cork* ; and a wish having been expressed, chiefly by young men engaged in business, for a second course, he delivered six lectures in August, to an audience of from 150 to 200 persons. At the close of the latter course, thirty gentlemen, including three physicians, formed a class for the purpose of receiving instructions in manipulating the head. Thirteen ladies formed a similar class ; and Mr D. had, besides, several private pupils. Immediately after the first course, an open meeting, to which admission was free, was held in the theatre of the Philosophical Institution ; and parties opposed to Phrenology were invited to attend. Only one of the prominent opponents appeared, and he, it seems, was totally unprepared with any kind of hostile argument. In the middle of September Mr Donovan was to deliver three lectures in *Youghal*, and he means to commence a course in *Belfast* early in October.—Mr Goyder lately delivered a few lectures on Phrenology to the *Sundrland* Literary and Philosophical Society, and has been invited to give another course.

Lectures on Mesmerism and Phreno-Mesmerism continue to be occasionally delivered. A paragraph in the *Sun* of 29th July states that " Mr Spencer T. Hall's third lecture on Mesmerism at the Western Literary Institution, Leicester Square, was delivered on Thursday evening to a numerous and approving audience. . . . We perceive that Mr Hall has announced his farewell lectures for the season, and the friends of Mesmerism cannot fail to be gratified by the progress it has made in his hands during his residence in town."—During the same month, Mr Adair lectured on Mesmerism at Chester and Nantwich. At the latter place, as we learn from the *Chester Courant*, " the lecturer experimented on several persons, natives of Nantwich, most successfully, and which proved highly interesting, as the subjects were known to the company. The course throughout was attended by a numerous and highly respectable audience, and was listened to with marked attention." In the beginning

of September, Mr Adair lectured in *Dublin* on the same subject. We extract the following account of one of his exhibitions from the *Dublin Pilot* of the 8th of that month. "On Saturday night Mr Adair, whose lectures and experiments illustrative of Phreno-Mesmerism have already attracted so much attention, appeared again in the Rotunda before a most numerous and respectable audience. The proceedings were commenced by Mr Henry Grattan Curran being called, amidst general applause, to the chair, in which he gave, by the elegant appropriateness of his language, and the suavity of his manner, universal satisfaction. Beside him, on the platform, stood Dr Little, who was greeted on his appearance with loud cheers; and Mr Mathias, who delivered a lecture a few nights back against Phreno-Mesmerism was called thereto, in order that he might scrutinize the patients and test the experiments. Several other gentlemen were also present. The young man was first brought forward by Mr Adair and thrown into the mesmeric sleep, and then an examination of pulse, muscles, skin, &c., was proceeded with. When concluded, all the medical gentlemen seemed unanimous in the opinion that the sleep was not simulated, and that the appearances which the patient exhibited were not such as would evince themselves in ordinary sleep. Rigidity of limb was then produced, and the patient being held back in the chair so as to preserve equilibrium, Mr Adair placed himself on the rigid legs while in the horizontal position, and stood there without bending them. A few other experiments were then tried before the young man was dismissed, and the young woman called forth. It was with no ordinary feeling of interest her movements were watched by the audience when she ascended the platform. The galvanic batteries were placed before her. Mr Abel and Mr Fagan, both gentlemen conversant with these apparatus, and accustomed to apply their powers as curative agents in a medical way, were there present to test her endurance. Surgeon Mathias and Dr Little suffered themselves first to be experimented on, and both gentlemen had to drop the *conductors* in an instant. They were then placed in Miss Watson's hand and the same force applied, and she held them for nearly a minute without wincing. While in her hands Dr Little frequently touched them, but had to snap his fingers away from their desperate violence. The only effect which they seemed to produce on Miss Watson was to slightly turn her arms inward and make them more rigid, which was occasioned by the powerful galvanic current that was then pouring through her. This experiment did not terminate until the audience became greatly pained, and cried out that they had seen enough of it. Miss Watson was afterwards put through several of the usual classic attitudes, and evinced in each, as before, the phrenological manifestations. The experiments being over, Surgeon Mathias was called upon by Mr O'Connor and others to state what then was his opinion, and acknowledged that his scepticism with regard to Phreno-Mesmerism had been greatly shaken that evening. The chairman too acknowledged himself a convert."

Lectureship of Phrenology in the Andersonian University, Glasgow.—We are happy to announce that the Managers of the Andersonian University have resolved to establish a lectureship of Phrenology in that flourishing Institution, and have advertised that they are ready to receive applications for the situation, accompanied by the necessary certificates. "As the relations of Phrenology to Physiology, Medicine, and Education, must be embraced by the proposed course of lectures, none but medical candidates will be considered eligible." In addition to the fees from students, there will be an endowment for a term of years, to the amount of

L.50 annually, which sum the Trustees of the late W. R. Henderson, Esq., in consequence of a memorial from the Glasgow Phrenological Society, have agreed to pay on certain conditions. The importance of this lectureship will be apparent, when it is mentioned that the number of students of Anatomy in the Andersonian University, session 1844-5, was 124, and the total number of tickets issued by the medical professors 606.

Prizes for Essays on Insanity.—The Society for Improving the Condition of the Insane has offered two Prizes, the first of Thirty Guineas, and the second of Ten Guineas, for the best two Essays upon "The Morbid Appearances observed in Insanity and its Complications, together with their Connection with previous Symptoms," should they be deemed of sufficient merit; and also Four Premiums, Two of the value of Three Guineas, and Two of Two Guineas, to be given to the Male and Female Attendants who shall produce the best Testimonials of meritorious service. All attendants who reside in Middlesex or the adjacent counties are eligible to compete for these premiums. The Essays and Testimonials must be sent in (the Essays accompanied by a letter with a corresponding motto, containing the author's name and address) on or before the first Monday in February 1846, addressed to T. C. Morison, Esq., Honorary Secretary to the Society, 26 Cavendish Square, London. The first Premium of Twenty Guineas was last year awarded to Spencer T. Smyth, Esq. of Gorleston, in Suffolk, and the second of Ten Guineas, to George Wilson, Esq. of Leeds.

Skulls from the Marquesas Islands—(Academy of Sciences, 18th Aug. 1845.)—Professor Dubreuil, of the Faculty of Montpellier, communicated to the Academy, through M. I. Geoffroy St Hilaire, the results of his observations on the skulls of two natives of Nukaiva, in the Marquesas. These heads were discovered in a Morai, and brought to France by M. Commerins, a naval surgeon. One of these heads belonged to a man, the other to a young woman. A striking point in the former is the extreme length of the antero-posterior diameter, particularly when compared to the transverse measure of the skull. The face is rather long, the malar bones protrude, and the nasal are elevated. The inferior maxilla is remarkable by the absence of its angle, the rami forming, as in the child, almost a straight line with the body of the bone. The female head is regular in shape, and even graceful in its contour—in neither does the facial angle approach 80°, a degree of aperture which M. Lebatard attests he has commonly found in these latitudes. The examination of these two heads confirms Dr Prichard's remarks on the resemblance between the islanders of the Southern Ocean and the Caucasian variety of the human family. They are also classed with the Caucasian race by Dr Monro.—*Medical Times*, Aug. 30, 1845.

Alleged Misrepresentation of Dr Spurzheim.—In Mr Cull's reply to my observations tending to shew that he had misunderstood and misrepresented the opinions of Dr Spurzheim with reference to the Greek and French languages possessing a greater number of tenses, and noting nicer distinctions in time, than the German and English, he singularly confines all his remarks to the Greek language. Now, since there are probably twenty readers of the *Phrenological Journal* familiar with the French language for every one critically acquainted with the Greek, an opposite course, viz., that of illustrating the argument by a reference to the French, would certainly have been much better calculated to put the public in possession of the merits of the question at issue.

Whether, by dropping all reference to the French language in his reply, Mr Cull means to abandon the position he before took up with regard to it, or whether he still retains his former position, I feel quite at a loss to determine. If the latter, then I must assert that *frappois* cannot always be rendered in English by the present participle and the imperfect tense of the verb *to be* (was striking), and that in such cases Mr Cull can no more give English *equivalents* for the words *frappois* and *frappai* than he can for *étais* and *fus*.

Mr Cull says, "The distinctions of time which the Greeks expressed by the words *ιτυπτον* and *ιτυψα* are accurately expressed by the English equivalents *was striking* and *struck*." Mr C., however, himself, in the article noticed by me (see P. J., No. 82, page 37), translates both *ιτυπτον* and *ιτυψα* *I struck*, and adds, "The English phrases annexed to the preceding Greek tenses are exactly equivalent to them."

Mr Cull next observes, "The English Greek grammars give English equivalents to ALL the Greek tenses. I turn to the paradigm of the active voice in an English Greek grammar before me, and I find,—imperfect, *ιτυπτον*, *I struck*; first aorist, *ιτυψα*, *I struck*; second aorist, *ιτυπτον*, *I struck*. Are these what Mr C. terms *equivalents*? and if so, what meaning can he attach to the word? For the sake of argument, let us suppose a nation so barbarous as to have but one word (say *zōōn*) to indicate all quadrupeds, and that, in consequence, the English words *horse*, *dog*, *cat*, *pig*, *goat*, &c., must all be rendered in this language by the single word *zōōn*; let us further suppose an individual to bring forward this defect in the language as a proof that the nation using it possessed less power of discriminating objects than others whose language was more precise. What, under such circumstances, would be thought of a person who controverted this doctrine by stating that the dictionaries and grammars of this barbarous language gave *equivalents* (!!) for all the English names of quadrupeds—meaning, by equivalents, the single word *zōōn*? Such a question needs no reply, and Mr Cull's position, when controverting the observations of Dr Spurzheim with regard to the Greek, French, German, and English languages, is precisely similar.

The German language, when compared with the Greek, is characterised by the same defective discrimination of time as the English. Vosz, one of the most eminent amongst the German literati of the present day, and who is especially celebrated for his translation of Homer, used to say that when employed on it, he was several times on the point of throwing his work in the fire, from vexation at the utter inadequacy of the German language to convey the nice distinctions in time of the original Greek. In fact, notwithstanding the very positive and confident tone adopted by Mr Cull, the superiority of the Greek language over the German and English, in marking time, is so very notorious, that it has excited the surprise of every Greek scholar to whom I have mentioned the circumstance, that any one should be found to maintain the contrary.

T. S. PRIDEAUX.

SOUTHAMPTON, 2d September 1845.

Reading of Character.—The following paragraph occurs in an article on "the alleged art of reading the characters of individuals in their handwriting," published in the *Northern Journal of Medicine*, No. XIII., May 1845:—"But little useful as this art may be in general, it may prove a source of harmless amusement, and of some incidental instruction; and one important advantage at least can be pointed out as attendant on the exercise of it, namely, the convincing men how easy it is, when the slenderest clue is obtained, for a pretender to make people believe that a great deal is known of their thoughts and character, when, in

truth, his knowledge amounts to little more beyond what they themselves inadvertently disclose to him, than that they have, in common with a large proportion of the human family, a small excess of certain modes of thinking and acting, which, in a somewhat less degree, are not unfamiliar to the whole race. The facility here referred to, on the part of many persons, to yield up their confidence the moment some small coincidence appears between the would-be-seer's words and the supposed thoughts, inclinations, or habits of the person whose character is under examination, is equally the foundation of the old popular faith in palmistry and other kinds of fortune-telling, and of the modern belief in Phrenology, Mesmerism, Phreno-Mesmerism, and other like delusions; and if the exercise of the harmless mystery of deciphering some points of character from handwriting can serve to awaken the public to the delusive arts so often practised upon them, the encouragement of its cultivation might prove a general benefit." P. 389. There is some truth in these remarks, and probably much of the reported success of phrenological quacks is thus to be explained; because the credulity of the subject is in such cases much on a par with the ignorance and presumption of the pretender,—and not even the editor of the *Northern Journal of Medicine* can hold converts of this description in so little respect as does the rational and well-educated phrenologist. It betrays no small ignorance, however, on the part of our contemporary, to affirm that such absurdities are the foundation of the belief in Phrenology, and we suggest that he might employ his pages more beneficially than in giving currency to such misrepresentations. He would think it very absurd in us were we to estimate medical science by the acts and writings of professional quacks; and we are not unreasonable in requiring that, on the same principle, he should not ridicule Phrenology because it also has the misfortune to be abused by ignorant or dishonest pretenders.

Western Penitentiary of Pennsylvania—Effects of Solitary Confinement.—The report of the Inspectors of this Institution for the year 1844, with the accompanying documents, afford a very favourable account of its condition, and furnish some views in relation to the Pennsylvania system of prison discipline worthy of attention.

The Inspectors in their report remark,

"In presenting our annual report to the legislature, we again congratulate you upon the complete success attending the Pennsylvania system of prison discipline. Fiercely attacked as it has been, upon the gratuitous assumption that it partook more of the barbarism of former ages than the mild and benevolent usages of modern Christendom, an experience of twenty years has proved the fallacy of these philippics, and illustrated its benefits and tested its results.

"An associate system of labour never can be conducive to reformation. The novice can never be improved by intercourse with the hardened convict; and although they may both be watched with untiring vigilance by discreet overseers, yet the practised criminal will communicate his baneful vices, by more than sympathetic influence, to the tender and susceptible mind of the youthful offender.

"It is true that, under the separate system, the criminal has no communication, other than that which he enjoys with the officers and inspectors of the Penitentiary; but this very seclusion brings his mind to the contemplation of his former misdeeds, which is the first step towards a genuine amendment of life. The interviews of the officers with the convicts are conducted with firmness and kindness, and with exhortations to reform, that they may be restored to that position in society

which they would have occupied had they not been guilty of a violation of its laws. In all our visits, we have scarcely found an unwilling listener to these admonitions, and the able and elaborate Report of the Moral Instructor, to which we with great pleasure refer, will advise you in detail of the gratifying success of the treatment adopted by your predecessors of the General Assembly.

"We can cite instances, within our present observation, of men who entered this Penitentiary without a trade, and with little or no education, who are now moral and respectable members of the community in which they live, pursuing their avocations with an ardour and industry evincive of their gratitude to this public benefaction."

The moral instructor in his report observes,

"The most serious objection brought against the system of 'separate confinement' by its opponents, is laid in its reputed tendency to produce insanity. If such, indeed, be its tendency, the history of this prison presents a singular exception to this influence. Amongst the one hundred and thirty prisoners now incarcerated within its walls, there is but a single case of insanity, and this one is supposed to have been slightly deranged at the time of his first imprisonment; and during the eight years it has been under the supervision and control of the present Warden, there have occurred but two cases of mental derangement. It is passing strange that *here*, among seven or eight hundred prisoners, and during the long period of eight years, there should have been found but two instances of insanity, if the native tendency of solitary confinement is to produce it. Other causes must have operated to produce this fearful malady, where, as in the instance of the Rhode Island state prison, out of forty cases in solitary confinement, ten have become insane; and under the congregated system three out of nineteen have exhibited symptoms of mental derangement. Under mild, affectionate, and firm administration of government, such as distinguishes the present chief executive officer of this institution, supported by competent and kind overseers, there is no danger of insanity resulting from separate confinement. The facts in the case of this prison, for a series of years, prove conclusively that there is none."—*American Jour. of Med. Sciences*, April 1845.

Irresistible propensity to steal.—Phrenologists well know that a mental faculty, either from an undue development, or the force of circumstances, may have such energy as to be uncontrollable. The perseverance by many in eccentric or vicious practices, in spite of every external inducement, can be accounted for in no other way. The perception of good and evil does not, of itself, confer the ability of following the one, and avoiding the other. The moral faculties are necessary to the preference of what is right. For this reason the criminal should excite our pity more than our anger, and the law should be a schoolmaster to teach and improve, and not to revenge.

This is a truth recognized by believers in Phrenology. Would that it were so by the rest of mankind, then may we hope for a happy alteration in prison discipline. Until it be, the phrenologist should never lose sight of a fact which tends to strengthen his position. "Facts are stubborn things;" and their accumulation will eventually destroy all that is opposed to them.

How many unhappy persons habitually steal—persons far above want and its temptations. The writer is acquainted with such an one. She is a most inveterate thief, and is known for miles around her neighbourhood. She is religious and industrious, and in some respects conscientious, for she is scrupulous in discharging her debts, and performing her promises.

She is sensible of her infirmity, weeps when the "terrors of hell" are threatened her, offers ample remuneration when detected, and presents her only excuse, "That she cannot help it."

Unfortunately she has children who inherit her disposition. They steal as it were by instinct; and if ever they gratify their propensity where they are unknown, they will doubtless become the victims of the law.

The intellectually insane are not considered responsible; and every means is taken by their guardians or the state to shield them from danger, and prevent their commission of crime. Ought not the morally insane to have care bestowed on them? Yes; the more especially because, possessing intellect, their power and disposition for mischief are proportionably increased.

HENRY NORRINGTON.

OTTERTY ST MARY, June 4. 1845.

Heads of Hocker and Connor.—Casts of the heads of these murderers have been made, and may be procured of B. Casci, No. 3 Harford Place, Drury Lane, London. Two views of each are given in *The Zoist*, No. X., where Dr Elliotson has published an article on the cerebral development and character of the criminals. After setting forth the character of Hocker, by classifying the facts of the murder which he perpetrated, and of his subsequent conduct, Dr E. describes his cerebral development as follows:—"The head was large. The intellectual portion was full, but the bulk was in the portion situate behind a line drawn from one ear to the other over the head. This portion was very large. In this portion, the organs of *Firmness* were of *extraordinary size*, and those of *Pride* and *Vanity* were *remarkably large*. On the other hand, the organs of *Circumspection* were *small*, and the whole coronal surface—the seat of the high moral feelings—sloped off strikingly at the sides, so that the organs of the *Sense of Justice*, *Veneration*, and *Benevolence*, were *very narrow and defective*, though high. The great size of the former organs, and the deficiency of the latter, gave Hocker his distinctive character of hardened villany and vanity. He had no moral motives of self-restraint, for his head was 'shapen in iniquity.' The organs of the disposition to Violence were large, like all the organs, except those of Circumspection, behind the line mentioned,—those of Courage, Sexual, Parental, and Friendly Love. (During his last night, we read that 'his slumbers were light and restless, and frequently the ejaculation, My mother, my poor mother, escaped his lips.') His organs of the Love of Property were not striking, and his wants, occasioned by his bad habits, and not the love of money, led him to the robbery. He alleged on the evening before his execution that he was a father, and devoted the money he had obtained from De la Rue to his illegitimate child and its mother; but nobody believed his boast, and it was put down in the papers to the account of 'his vain pride.' His organs of the disposition to Violence were quite sufficient to enable him to murder with violence under strong motives and with his little moral restraint. His organs of Language were large: those of Ideality moderate; and those of Intellect in general very good. The head was not that of a stupid grovelling brute,—the low murderer: but of an intelligent, conceited, showy, determined, unconscious hypocrite."—Connor's head "was of a very inferior kind. It was altogether smaller than Hocker's: the intellectual portion much less, especially about Causality; and moreover the frontal sinuses seemed large; and from the general appearance I should fancy that the skull was thick. Firmness and Pride were less, and yet a line drawn

from the ears over the head was as long as in the case of Hocker's, on account of the remarkable bulging out just over the ears. The moral surface was low and rather slanting at the sides. Cautiousness was situated very low down, but, together with Cunning, was very large; the mass of this lateral region being enormous. He appears to have had so strong a thirst for revenge, that he told many persons he would 'pepper' or 'serve out' the unfortunate woman, and so far his Cautiousness was overcome: yet as soon as the murder was committed he told a man that he did not know whether he had killed her, but he had 'been home and taken off his things, so that they should not know him.' His conduct shewed him to be very stupid, and an attempt was made after the trial to prove him insane, since, when he was in a passion, he would throw any dangerous weapon that he could lay his hand upon at those near him; and on one occasion killed his mother's cat and a favourite bird, and on others had exhibited savage conduct." Measurements of the heads are given. Hocker's was $22\frac{1}{2}$ inches in circumference over the eyes; Connor's, $22\frac{3}{4}$. From ear to Firmness—Hocker's, $6\frac{3}{4}$; Connor's, $5\frac{3}{4}$. Breadth at Destructiveness—Hocker's, 6; Connor's, $5\frac{3}{4}$.

Relative Liability of the Sexes to Insanity.—In a lecture by Mr Baillarger, reported in the *Lancet* of 6th September, two questions are pointed out as distinct, though often confounded with each other. The *first* is, whether insanity is more frequent in men than in women; the *second* inquires into the influence of sex over the production of insanity. The former question M. Baillarger concludes to be as yet undecided, for want of adequate statistical evidence; as to the second, his conclusions are thus summed up: "We find, with respect to the influences inherent to the two sexes, that women, both by their temperament and their intellectual and moral dispositions, appear to be more predisposed to insanity, and a similar conclusion may be extended to the influence of puberty. They are, moreover, subject to predisposing causes peculiar to themselves, as menstruation, pregnancy, lying-in, lactation, the critical age, &c. It will be evident, therefore, that if the influences strictly depending on the sex were the only ones capable of provoking insanity, this disease would be more frequent in women; but the balance is restored on the side of the men by the influence of general paralysis, so frequent among them, by excesses of all kinds, by the impulse of ambition, and by numerous other causes." The first question is ably handled by Dr Thurnam of York, in a paper printed in our 83d Number, p. 123 of this volume.

Dr Elliotson's Answer to Mr Prideaux. (From the *Zoist*, No. IX.)—Mr Prideaux, in the last Number of the *Edinburgh Phrenological Journal* (No. LXXXII., or New Series, No. XXIX.), has considered my arguments in favour of genuine mesmeric influence, independent of will, sympathy, or suggestion, or common causes, being capable of exciting distinct cerebral organs, any of which, doubtless, may sometimes excite them in the mesmeric state, and lead mesmeric experimenters to very wrong conclusions as to their seat and character,* to be overthrown by my contending that, when tractive movements are made with reference

* See my remarks in regard to will, *Zoist*, No. III., pp. 242, 243; No. VI., pp. 231, 232: in regard to suggestion, No. III., pp. 239—241: as to sympathy, I can excite a patient to a frightful rage by the finger on Destructiveness, while I am full of fun; and make him haughty, while I feel brimful of kindness and humility.

to a patient in the mesmeric sleep, they are discovered through some occult sense, and thus involuntarily responded to by the patient. The case of mesmeric excitement of cerebral organs by pointing is, however, totally different. The patient frequently knows nothing of the seat and character of the cerebral organs; and thus cannot know, by an occult sense, what you are aiming at, as when he observes, by an occult sense, that you are making beckoning or drawing movements; and, if he were a phrenologist, I do not see how he could will himself into a real ferocious rage, out of it into the most humble and fervent piety, out of this into the haughtiest pride, out of this into the tenderest affection or benevolence, as quickly as you touch over the organs. But if this were all done through perception by an occult sense of what the mesmeriser was manipulating for, it ought to occur in those patients in whom pointing is sufficient, equally whether the finger be covered by a thick glove or not, and whether the fingers point to the organs with a paper-cutter, pencil-case, &c., or only by themselves. If the patients know what you are aiming at in the one instance, so must they in the other. But, whereas tractive or beckoning movements take effect if the hands are covered with thick gloves, or if anything is held in the hand while it makes the movements, no effect coming only when the tractive movement is made with an inanimate substance, the connection of which with the person who moves it is concealed; the cerebral organs have never been excited in my experiments when the pointing fingers were covered with gloves, or when they pointed with an inanimate substance held evidently by them over the organ. I stated in the paper to which Mr Prideaux refers, No. VI., p. 214, that "a tractive movement with one finger, would signify the wish of the experimenter often just as well as one with the whole hand or both hands. The result would equally ensue whether he wore gloves or not; nay, if tractive movements were made with a pencil-case, a paper-cutter, &c., she obeyed, provided care was taken to make it evident that it was moved by the experimenter. If the pencil-case, &c., was moved with a careful concealment of all motion of the hand, or an empty loose glove was employed for traction with the same care, no effect followed. It was just the same with the Okeys. The power of traction with them was intense, even at a great distance. One of them has been placed with her back against a board, and I have concealed myself behind it, and put forth one hand, and made tractive movements outwards near one of her hands, and her hands moved outwards; but, when afterwards I kept my hand behind the board, and made the tractive movements with a piece of wood, &c., her hand was unaffected,—there being no reason for her to believe that any one was ordering a movement from her." But in regard to pointing over her cerebral organs, I said (p. 227), that "pointing over the organs with thick gloves on the fingers prevents all effect; nor does any effect come if the parts are pointed at with anything else, as a paper-cutter, the corner of a book, &c.:" nor can I excite them by breathing over them. Mr Prideaux says (*Edin. Phren. Journal*, No. XXIX., pp. 15, 16), that he has "on every occasion, when speculating on the probable cause of phreno-magnetic phenomena, referred to sympathy and volition conjointly." I cannot see how sympathy or volition had any share in the facts which I mentioned in No. III., pp. 242, 243, and No. VI., pp. 232, 233. I may add that Mr Aglionby, the member for Cockermouth, mentioned to me last week, that, knowing scarcely anything of Phrenology, and producing the most dramatic effects upon a country girl perfectly ignorant of it, he thought he had his finger on Constructiveness, and expected in vain the usual manifestation of it; when all she would say

was, that she was thinking of her dinner. He looked and found his finger not on Constructiveness, the situation of which he knew, but on some other spot where lay an organ of the function of which he was ignorant; so he went to his bust to learn what organ lay there, and found it was Alimentiveness.

[Mr J. C. Colquhoun, in the introduction to his lately published translation of Weinhold's *Lectures on Somnambulism*, expresses his astonishment at the following assertion of Dr Elliotson with reference to Phrenomesmerism—"I have made experiments in mesmerising daily"—"and I have never produced any effect by *merely* willing." "This," says Mr Colquhoun, "is, at best, ambiguous; but must we suppose the learned Doctor to be utterly ignorant of the only conceivable mode in which such phenomena can be produced in the particular circumstances? If so, he has, as yet, made but little progress in his mesmeric studies, and his experiments are of small value. What can the phrenological Doctor mean by the foregoing assertion? Does he not pretend to magnetise a particular organ with the intention of producing a certain manifestation; and does not this very act itself imply an exercise of the will? And how does he contrive to magnetise an organ? If the Doctor does not discover his own will, he may depend upon it that, if in the requisite state, his magnetic patients will not fail to do so for him." P. 25. Mr Colquhoun's apprehension is very obtuse; to our's it is evident that Dr Elliotson means that when he has tried to excite cerebral organs by willing their action, *without touching or pointing to the head*, no effect has ever been produced—whence we infer that volition is not the only mode in which the phreno-mesmeric phenomena are producible. Mr Colquhoun styles it "the only conceivable mode;" but all modes are equally conceivable or inconceivable. He makes a furious attack on the materialistic views of Drs Elliotson and Engledue, discharging against them however, much more ridicule than argument. Concerning Dr Gall he says, "If we are correctly informed, he lived and died in the uncompromising profession of materialism and atheism"! Our readers will recognise the important services of the IF in this sentence when they call to mind the well-known fact, that Gall regarded the existence of the organ of Veneration as a proof of the existence of God as its object: "Nature herself," says he, "has engraven the idea of God in all hearts." (See the chapter on Veneration in his work on the Functions of the Brain, vol. v.) So much for the correctness of Mr Colquhoun's information.—ED. P. J.]

What is Poetry?—In a preface written by the late Dr Thomas Arnold to a volume of selections, entitled *Poetry of Common Life*, he says:—"By *poetry* we mean certain feelings expressed in certain language. *Poetical feelings* are merely, in other words, all the highest and purest feelings of our nature—feelings, therefore, which, considering what we generally are, cannot but be of rare occurrence. It has been truly said, that

'Our better mind
Is like a Sunday's garment, then put on
When we have nought to do,—but at our work
We wear a worse for thrift.'

Our common temper, therefore, which is but too generally cold, and selfish, and worldly, is altogether unpoetical; but let any thing occur to put us above ourselves, any thing to awaken our devotion, our admiration, or our love—any danger to call forth our courage, any distress

to awaken our pity, any great emergency to demand the sacrifice of our own comfort, or interest, or credit, for the sake of others, then we experience for the time a *poetical temper* and *poetical feelings*; for the very essence of poetry is, that it exalts and ennobles us, and puts us into a higher state of mind than that which we are commonly living in." Of poetic language he says:—"When we are feeling any strong passion, it instantly alters our manner of speaking from that which we practise on common occasions. It clears away all that is mean and vulgar, all that is dull and tiresome, in our language; and renders it at once spirited, noble, and pithy. The mind being highly excited, becomes more than usually active; it catches with great quickness every impression given by surrounding objects; it seizes rapidly every point in which they may seem to express sympathy with its own feelings. Hence its language is full of images and comparisons; it is unusually rich and beautiful, that is, it crowds together a number of ideas in a short space, and expresses them in the most lively manner, because its conception of them is keen and vivid. Again, the very tone of the voice is altered; it becomes more rapid and animated, and the flow of our words is less broken, and more measured and musical, than in common unexcited conversation. This will be understood in a moment by just turning to the poetical parts of the Bible: for instance, let any one observe the difference between the first two chapters of the Book of Job, which contain the mere story, and those which immediately follow them. He will find his tone and manner of reading, if he be reading aloud, change instantly in going from the second chapter to the third. *Poetical language* is, in truth, the language of excited feeling; and this is what was meant by saying, that as every man has been in a poetical state of mind at some time or other of his life, so almost every man must, in some degree, however imperfect, have expressed himself on such occasions in poetical language."

The Conscience of Criminals.—It may be asked, If remorse is so injurious to health, why do not prisoners guilty of great crimes die from this cause? Because they do not feel any remorse. They do not and cannot usually be made to feel guilty: they may say they do so, but a thorough acquaintance with them will convince any one that they scarcely ever feel any remorse. For the correctness of this, I appeal to all those who have long had charge of prisoners, and made careful inquiries on this subject.—*Brigham's Inquiry concerning the Diseases and Functions of the Brain, &c.*, p. 303. [Dr Gall, who frequently visited prisons in order to study the characters of their inmates, teaches the same doctrine in the strongest terms; and, in vol. xv. p. 277 of this Journal, we (at the alleged risk of renouncing all "pretensions to candour and common sense") expressed "the deliberate belief that criminals are often destitute of the consciousness that their conduct is wrong and culpable." The unexceptionable testimony of Mr Frederic Hill, Inspector of the Prisons of Scotland, has been given to the fact that "a considerable class of offenders must be looked upon as incurable." See extract from his Seventh Report, in our 16th vol., p. 17.—ED.]

Remarkable case of Insanity assuming a Tertian Type.—A female, aged 45, had an attack of encephalitis in July 1842, following mental distress from the loss of a daughter. In 17 days she recovered; but two days after, symptoms of mental alienation, amounting to mania, presented themselves. The whole of that day (the 19th) was passed in this state; on the 20th she appeared well, on the 21st the maniacal access returned;

on the 22d the mind was again sound, and the day after there was a fresh maniacal attack; and thus matters have been going on for about a year. When questioned upon her good day, the patient states that she feels herself quite well, and has no need of medical advice. She does not remember the loss of her daughter, or the cerebral attack which followed that event. On all other matters she has entire possession of her faculties, and answers questions correctly, but pertinaciously refuses medicine. There is no emaciation, and not even the most practised physician can detect in her countenance any traces of mental disorder. None of her functions are disordered; and on her day of calm she goes and provides for her family, and attends to her devotions with perfect propriety. Cases of this description are extremely rare; the only one which the author knows of, is a case recorded by Dr Johnson in the *Edinburgh (London?) Medico-Chirurgical Review*. But the patient was monomaniacal, or at least subject one day to hallucinations, and one day not,—and ultimately committed suicide.—*Buletino di Bologna*, quoted in *Gazetta Medica di Milano*, March 1844, and *Cormack's Journal*, July 1844.

Destructiveness of the North American Indians.—The passion for depriving the animal creation of life is so strongly implanted in the breast of the North American Indian, that it costs him a pang to pass bird, beast, or fish, without an effort to destroy it, whether he stands in need of it or not. The tendency to destructiveness is a vehement instinct of their nature. Near York Factory, in 1831, this propensity, contrary to all the remonstrances of the Company's servants at that place, led to the indiscriminate destruction of a countless herd of rein-deer, while crossing the broad stream of Haye's river, in the height of summer. The natives took some of the meat for present use, but thousands of carcasses were abandoned to the current, and infected the river's banks, or drifted down into Hudson's Bay, there to feed the sea-fowls and polar bears.—*History of the Oregon Territory, &c.*, by John Dunn, late of the Hudson's Bay Company; quoted in the *Athenæum*, 7th December 1844, p. 1114.

The Dwellings of the Poor.—According to the evidence of Dr Southwood Smith, lately given before the Commissioners for Inquiring into the State of Large Towns and Populous Districts, the mental faculties, from defective ventilation, drainage, cleanliness, &c., suffer impairment as well as the bodily health. With the bodily vigour and industrious habits of a healthy and independent peasantry, are lost "the intelligence and spirit proper to such a race. One of the most melancholy proofs of this is the quiet and unresisting manner in which they succumb to the wretchedness of their lot. They make no effort to get into happier circumstances; their dulness and apathy indicate an equal degree of mental as of physical paralysis; and this has struck other observers who have had opportunities of becoming acquainted with the real state of these people." In the Poor-Law Commissioners' Report on the Sanatory Condition of the Labouring Population, there is the following statement, which, says Dr Southwood Smith, "impressed my mind the more because it recalled to my recollection vividly similar cases witnessed by myself." "In the year 1836," says one of the medical officers of the West Derby Union, "I attended a family of thirteen—twelve of whom had typhus fever—without a bed in the cellar, without straw or timber shavings—frequent substitutes. They lay on the floor, and so crowded that I could scarcely pass between them. In another house, I attended fourteen patients: there were only two beds in the house. All the patients lay on the boards, and during

their illness never had their clothes off. I met with many cases in similar conditions; yet amidst the greatest destitution and want of domestic comfort, *I have never heard, during the course of twelve years' practice, a complaint of inconvenient accommodation.*" Dr Smith's commentary on this fearful statement is as follows:—"This want of complaint, under such circumstances, appears to me to constitute a very melancholy part of this condition. It shews that physical wretchedness has done its worst on the human sufferer, for it has destroyed his mind. The wretchedness being greater than humanity can bear, annihilates the mental faculties—the faculties distinctive of the human being. *There is a kind of satisfaction in the thought, for it sets a limit to the capacity of suffering which would otherwise be without bound.*" Another necessary consequence of the action of malaria on the system, is the use of unwholesome stimulants to counteract the debility it occasions. "The poison generated in these neglected districts," "is a sedative poison, among the most distinctive characters of which, are the depressing effects produced by it both on mind and body. This is one of the main causes, not only of the mental apathy of which I have already spoken, but also of that physical listlessness which makes them incapable of any great exertion. I am satisfied that this feeling of depression is one of the chief inducements to the use of stimulants, which the same feeling naturally leads them to take in excess, whenever a sufficient quantity can be procured. I quite believe, from what I have observed of them, that the inducement to take the most pernicious amount of stimulants often arises from a sensation of lassitude and languor, the direct result of the debilitating causes that are incessantly acting upon them, and that render them so incapable of physical and mental exertion." The stimulants here alluded to are ardent spirits and opium, of which the latter is comparatively rarely taken by the adult, but given to children in almost incredible quantities.

Some time ago the following excellent remarks appeared in the *Manchester Times*:—"We refer with great gratification to the unanimous decision of the Town Council, that a portion of the funds at its disposal shall be devoted to the opening out of close courts and narrow streets, with the view of causing the thorough ventilation which is necessary to the preservation of health. We have rejoiced to see the probability of a sum of L.50,000 being subscribed for the purchase of fields or gardens, in which every class of persons in our dense population may enjoy health-giving air and light; and we anticipate with pleasure the time when the toil-worn man shall be seen with his wife and children delighting in the fresh breeze, the verdant turf, the luxuriant foliage, and the glorious sky. Many thanks to the members of the Society for the Preservation of Ancient Footpaths, headed first by the benevolent Richard Potter, and latterly by his no less benevolent brother Sir Thomas, for the many cool shady lanes whose destruction they have averted—many thanks to them for the preservation to the working classes of many delightful walks; and many thanks to the noble-hearted men who have given of their abundance, in thousands, and hundreds, and fifties, to secure places of recreation for those whose labour creates wealth, and multiplies the means of enjoyment. Each and all—footway-protectors and field-givers—deserve the warm gratitude of this and succeeding generations. But, great as are the advantages derived or to be derived from their humane and generous labours and contributions, we do think that equal benefits will be conferred by carrying out to its full extent the principle unanimously recognised by the Town Council; for if it be important that the toil-worn should have

easy access to light and air in green fields and shady lanes, it is equally important to admit light and air *directly to their abodes*. Look at the evidence of Dr Southwood Smith, and our townsman Mr Philip Holland, as to the effect upon health, and even upon morals, of residence in ill-ventilated, ill-drained, and ill-cleansed courts and streets. The one tells us that the benevolent aid of the physician is comparatively useless when the patient is so situated, and the other that mortality in the worst houses in the worst streets is double that in good houses and good streets! The report on the condition of large towns and populous districts is full of similar proofs. We trust, therefore, that the Improvement Committee will enter upon its labours with a full conviction that they are for the benefit of our common humanity, and that Manchester will become an inspiring example to every city and town in the kingdom in this great work of civic reform." Subsequently the same paper announces—"The committee have laid before the public the outlines of their scheme for giving to the people of Manchester the means of recreation by the opening of parks and walks. They propose the formation of four places of recreation, of about thirty acres each; that a gymnasium, on a large scale, be erected in each, free of charge; that, where possible, spaces be obtained for ball-alleys, quoits, skittles, archery, and other active sports, and available to players at a charge merely to cover the implements of play that may be used; that each park contain one or more fountains of pure water; that numerous seats be erected in proper situations for general accommodation; that buildings be erected where tea, coffee, and other refreshments may be obtained, but where no intoxicating liquors of any kind shall be allowed; that such parks be open to the public on all days of the week; and that the gymnasium, ball-alley, quoit, skittle, or archery grounds shall be closed on Sundays. The committee add, that they have every reason to expect that public baths, wash-houses, &c., free, or at a merely nominal charge, will be erected simultaneously with the promotion of the parks and play-grounds."

Acquittals, on the ground of Insanity, of Persons tried for Murder.—Since the discussions which followed M'Naughten's trial, several cases have occurred, in which the juries have not scrupled to disregard the criterion fixed upon by the assembled judges (*ante*, xvii. 89). We are glad of this, and hope to see the law itself speedily modified into accordance with the science of the age. In the case of Mr Touchett, who was tried on 23d October 1844 before the Central Criminal Court, for firing at the keeper of a shooting-gallery in Holborn with an intent to murder him, there was evidently complete consciousness on the part of the perpetrator that the act was criminal; he knew perfectly "the difference between right and wrong." Nevertheless he was acquitted, in consequence of the decisive proof which was brought forward that he had long laboured under moral insanity. Being tired of life, he wished to be hanged, and sought to accomplish his desire by the murder of a stranger.—Another madman, named Frost, who killed his children that he and they might go to heaven, has also been acquitted.—But a still more remarkable case is that of Martha Brixey, who was tried on 16th May last, for murdering her master's child at Greenwich, this very act being the first decided symptom of insanity which had appeared. The *Lancet* of 24th May contains some excellent remarks on this case, and we here extract a portion of them:—"The form of homicidal insanity observed in persons labouring under delusions or hallucinations, is generally acknowledged by the medical profession, but the same unani-

mity cannot be said to exist with reference to that infinitely more rare form, in which the desire to kill is the *only* symptom of the disease. Esquirol himself, who has so much contributed to elucidate the subject, when he published his first essay on Homicidal Monomania, in 1818, denied its existence. He was subsequently, however, obliged to retract this denial, which he did fully in 1826. The principal case which induced him to thus change his previous opinion, was that of Charlotte Cordier—curiously enough, a very similar one to that of Martha Brixey. That young woman, seven-and-twenty years of age, was also in service. Of a kind, lively, amiable disposition, she had never given the slightest symptom of insanity. She became, however, suddenly, more serious than usual, and negligent in her attendance on her master; so that after a few months she was discharged. Shortly afterwards she went into the house of a cousin, and impelled, as she afterwards stated, merely by an inexplicable desire to kill, went up stairs to a room where her cousin's baby was lying asleep, and cut off its head. Several other cases have since occurred, which have rendered the existence of this form of homicidal monomania undeniable, but none have been more decisive than that of Martha Brixey. It must, therefore, henceforth constitute an important precedent, owing both to the very peculiar features of the case, and to the very rational course adopted by the jury. In her case, as in that of Charlotte Cordier, the mind was not in its ordinary state, as proved by her capricious conduct with reference to the dress which had occasioned her dismissal from her master's service; but this conduct cannot, however, be said even to verge on insanity. Her health had also for some time been disordered. As far as we can judge from the reported statement of the medical attendant of the family, it would appear that she was labouring under amenorrhœa, probably chlorosis." "We may remark, that the publicity given to such cases as that of Martha Brixey is not without its evils. It would appear that this form of homicidal mania is susceptible of being propagated by imitation. After the trial of Charlotte Cordier, many persons were seized with the wish to kill those who were dearest to them. Esquirol gives several very singular instances of this extraordinary fact. A husband wakes in the night with the strong desire to kill his wife; a mother is afraid to see her child, having conceived a like desire to put it to death: they both applied for advice to Esquirol. Many other physicians met with similar cases. The existence of this form of mental disease is certainly a fearful page in the history of the human mind." Very recently, a man named Richard Simpson, who murdered his mother in a drunken fit, has been acquitted at Appleby upon the ground of insanity. The case is reported and commented on in the *Lancet* of 13th September. The writer thinks the proof of insanity insufficient. "In our opinion," says he, "Simpson was merely a drunkard, 'violent in his cups,' who killed his mother in a fit of sullen, drunken brutality. That violent drunkards are to a certain extent insane, we willingly admit, but are not prepared to say that they ought to be regarded, like the really insane, as irresponsible agents. Their insanity is the immediate result of *voluntary* indulgence, not of mental disease, although it may indicate congenital mental weakness or infirmity." He admits the existence of drinking monomania, but does not think that Simpson was affected by it.

As a contrast to these cases, take that of James Gibson, who was tried in Edinburgh, last December, for wilful fire-raising (see the *Lancet* of 18th January). Professor Christison, Dr Simpson, president of the College of Surgeons; Dr Cormack, lecturer on Medical Jurisprudence; Dr Poole, physician to the Montrose Lunatic Asylum; Dr

Ferguson, surgeon to the Montrose prison; and Dr Laing, surgeon Brechin (where the crime was committed)—all expressed their belief that the prisoner was insane. Dr Malcolm, of the Perth Asylum, was the only medical man who thought him sane, and even he admitted that Gibson had an "ill-regulated weak mind." The town-officer of Brechin had heard him called "daft Gibson." His conversation after the deed was done was abundantly wild. He spoke of the burning of the warehouse as a crime that had been forced upon him; said that he had been commissioned by the landed gentry to fire the premises; that there was a ship of war in the Roads to aid him, &c. In reference to his trial he occasionally shewed a certain degree of address or cunning, qualities frequently found co-existing with insanity. The Lord Justice-Clerk held that the prisoner's mind was not in a state to exempt him from legal responsibility; and he laid it down that "this was just one of those instances in which the juries were better judges of the real state of a man's mind, from hearing all the facts connected with the crime charged against him, than medical men who only saw the prisoner once or twice, when he might be cunning enough to perceive the object of their visit, and carry through a deception upon them for the express purpose of finding what the medical men could be led to think of him." With all deference to his Lordship, says the *Scotsman* of 3d May, "this was a most questionable doctrine. It is part of a physician's education to study the symptoms of mental derangement. The task of distinguishing the sane from the insane is often found to be one of much difficulty; but in proportion as it is difficult, surely the judgment of a man who has the advantage of regular training, and has seen and considered many such cases, is greatly preferable to the hasty conclusions of an ordinary jurymen who had never paid any attention to the subject. Here were six medical men, some of them eminent and of large experience, who held Gibson to be insane. His Lordship thinks his own opinion better than theirs, charges the jury to deal with the prisoner as sane, and they bring in a verdict of guilty. What is the result? Gibson was sent off to Millbank prison, preparatory to transportation. In the prison the true state of his mind came out. His insanity, as we now learn, became so manifest and decided that it was found necessary to remove him to the Bethlem asylum for criminal lunatics." This removal, as we have ascertained from Dr Webster, a Governor of the hospital, took place the very next month after the trial. In answer to our inquiries, Dr W. farther mentions that M'Naughten, who is still in the hospital, is not violent, but shuns the observation of visitors as much as he can. Dr W. understands that his mental health has not improved since his admission. Oxford continues in the criminal wing; he appears quiet, and has remained much in the same condition for the last two or three years.

Contraction of the Foramen Lacerum Posterius in Maniacs and Suicides.—The professor of anatomy in the University of Kiew, Dr Kasloff, has for several years directed his attention to the state of the great vessels of the brain in cases of insanity, and finds himself forced upon the conclusion, that insanity in all its forms is most intimately connected with derangement of the circulation within the cranium. In the course of the year 1841, he had particular occasion to remark that the foramen lacerum posterius was very commonly contracted in the skulls of those who had died insane, or who committed suicide. The contraction generally occurred on one side only, rarely on both. In many cases he found the foramen, where it transmits the internal jugular vein, reduced to a mere narrow slit, which with difficulty admitted a common probe.

The furrow for the lateral sinus which led to this contracted foramen lacerum, was neither so broad nor so deep as in ordinary skulls, and the thimble-like cavity was almost level with the base of the cranium. The jugular vein that occupied it could not have had half, frequently not one-third, and occasionally not one-fourth, of its usual diameter. The canalis carotidis of the corresponding side did not appear to have undergone any similar contraction of its diameter. Along with the contraction of the foramen lacerum posterius, however, a conspicuous enlargement of those foramina which transmit veins from the interior to the exterior of the skull was very regularly observed; the foramen mastoideum, and foramen parietale of the corresponding side, for example, were found of two Paris lines in diameter, and supernumerary foramina presented themselves in situations where none are commonly seen. In every skull of a maniac or suicide in the anatomical collection at Kiew, Professor Kasloff observed the contraction of the foramen lacerum posterius in a greater or less degree upon one or both sides. In seventeen of the twenty-one skulls belonging to the above category, the peculiarity was remarkably displayed. On comparing the foramina lacera of the two sides, he found that where the one on the healthy side was four and a half Parisian lines in diameter, the contracted opening measured but two lines; where the healthy orifice measured four and a quarter lines, the contracted one still measured only two lines; where the former measured three and a half and two and a half lines, the latter measured but one and one and a half line. In quoting these facts, Professor Kasloff still admits that he has examined other skulls of maniacs where he observed nothing of the same kind. It is impossible, however, not to regard the instances quoted as full of interest for the pathogeny of insanity. It seems quite certain that the afflux through the carotid and basilar arteries continuing unimpeded, if any (even a very slight) hindrance to the return of the blood by one of its principal channels be encountered, a stasis or accumulation within the vessels of the brain must of necessity ensue; and that this can be without influence upon that important organ, "the soul's frail dwelling-place," is admitted on all hands to be impossible. Now, here is a permanent obstacle to the due return of the blood from the brain, which, if it have not entirely escaped the notice of pathological anatomists (which it has not), appears never to have been viewed till now in its legitimate connection with, and bearing upon, functional derangement or organic disease of the brain.—*Zeitsch. f. d. Gesammt. Medicin, von T. W. Oppenheim, Jan. 1844*; quoted in the *Medical Gazette*, vol. xxxiv., No. 855, p. 95.

Dr Forbes's farther Searches for Clairvoyance.—In the *Medical Gazette* of 18th July, Dr Forbes has published "Notes of a few more Trials with the Mesmerists in a second Search for Clairvoyance." He says,—“Having heard much of the feats of Adolphe, which were said by some to outdo even those of his brother Alexis, and having learnt that Dr Elliotson considered him a genuine somnambulist, I was once more induced to renew my search for clairvoyance, notwithstanding the inauspicious results of my former attempts. In setting about this second trial, as in my previous examinations, I determined to give the mesmerists no just grounds of complaint against me, while I took the ordinary precautions against being imposed on by imperfect or false evidence. I resolved to interfere in no way with the course of their proceedings, contenting myself with being a simple observer of what was passing, or, at any rate, no further an actor in the scene than was in accordance with the wishes, or, at least, with the full sanction of the directing mesmeriser. And it

is but justice to Mr Vernon to state, that while expressing his full satisfaction with the course I and my friends took at these sittings, he interposed no obstructions in the way of our proceedings, and afforded us no grounds for believing that there existed any unfair collusion between him and the subjects of his mesmeric manipulations. He certainly seemed desirous that we should ascertain the truth ; although, if he still believes in the good faith of his Lady-performer, after what he witnessed along with me, he must be much more credulous than becomes a philosophical inquirer." Dr Forbes relates the details of nine trials, four of which were with Adolphe, three with Mr Vernon's Lady-somnambulist, and two with Miss Von Gönner, who undertakes to examine and prescribe for, mesmerically, patients either at her own or at the patients' houses. These trials were carefully planned, and adroitly as well as fairly executed ; and, judging from the published statement of facts, we agree with Dr F. in thinking the following conclusions unavoidable:—" 1. That some of the exhibitions above described bear the open and unmistakable impression of imposture. 2. That in all the cases, as in that of Alexis formerly published, wherever there resulted any positive success, the fact can be accounted for on ordinary principles, without the aid of mesmerism. 3. That all the instances of success occurred where there was, at least, a possibility of succeeding, by the ordinary exercise of the senses in their normal state. 4. That where care was taken to render the ordinary operation of the senses impossible, failure invariably resulted. 5. That the TRIALS failed utterly in proving the possession of CLAIRVOYANCE by any of the parties submitted to examination. 6. That no proof was afforded that these parties were really in any special abnormal condition, such as is known by the name of somnambulism. 7. That, on the contrary, the evidence adduced renders it extremely probable that the apparent abnormal condition was feigned, and that these persons were, consequently, IMPOSTORS." On 15th August Dr Forbes published, in the same Journal, " Notes on yet Another Trial," the subject of which was George Goble, copying clerk to a gentleman in the Temple, and who undertook to read a paper placed in a card-case, which, for greater security, was tied up with red tape. Little bits of cork were put into the case along with the paper, and by their falling out revealed the imposture ; whereupon George confessed his trickery, and implored forgiveness.

Influence of the Study of Physical Science on the Mind.—To say nothing of the liberalising influence which the study of the natural sciences cannot fail to exercise on the mind, we should not lose sight of the important fact, that " the habits of accurate and persevering observation, of investigation, of abstraction, and of correct reasoning, are more or less produced and cultivated by the study of the philosophy of nature." (See Art. Intellectual Education in Rees's Cyclopædia.) Nothing, indeed, is better calculated for cultivating that philosophic spirit which is of so much importance to the medical practitioner, than habituating the mind to the patient investigation of the various phenomena of nature; and to the close observation of those laws by which the occurrence of such phenomena is regulated. Medicine itself being but one of the great departments of natural science, it is obvious that a mind well drilled in the general and abstract principles of the latter is much better prepared to encounter the study of the former, and much more likely to attain success in it, than when such previous and preparatory study has been neglected.—*Medico-Chirurgical Review*, April 1844.

Books received.—British and Foreign Medical Review, No. 39, July 1845.—Report of the Directors of the Dundee Royal Asylum for Lunatics, 1845.—Mesmerism: Cases and Disclosures. By James Arnot. Parts I. and II. London: T. C. Moore. Royal 8vo. 1845.—The American Phrenological Journal, Dec. 1844, and Jan., Feb., July, and August 1845.—The American Journal of Insanity, Nos. II., III., IV., and V., Oct. 1844 to July 1845.—Contributions to the Mathematics of Phrenology; chiefly intended to aid Students. By James Straton, Secretary to the Phrenological Society, Aberdeen. Aberdeen: W. Russel. Edinburgh: Maclachlan, Stewart, & Co. London: Simpkin, Marshall, & Co. 8vo.—Théorie des Ressemblances, ou Essai Philosophique sur les Moyens de déterminer Dispositions Physiques et Morales des Animaux, d'après les Analogies de Formes, de Robes, et de Couleurs. Par le Chevalier Da G. M.... Troisième Partie. Paris, 1844. 4to, pp. 206.—Sugli Istinti: Pensieri dell' Abate G. B. Restani attenenti alle Osservazioni Critiche del Dott. Mauro Rusconi sul Sistema di Gall, &c. &c. Milano, 1844. 8vo, pp. 80.—The Medical Times, weekly.

News papers received.—The Economist, July 5.—Cork Southern Reporter, July 15, Sept. 4.—Chester Courant, July 23.—Sun, July 29.—Dublin Pilot, Sept. 8.—The New Moon, Nos. 9 and 10.—The Morningside Mirror, No. I., Sept. 15. 1845. Morningside: Printed at the Asylum Press.

To Correspondents.—The paper on Comparison, and Mr Morrison's letter, are respectfully declined.—We have received Mr Wallbridge's communication, but not his book.—A correspondent, who subscribes "A Thorough Phrenologist, and a Believer in Man's Religious Nature," calls our attention to the following passage in Warne's *Harmony between the Scriptures and Phrenology*, page 10 of the Glasgow edition:—"Furthermore, Phrenology says that the moral sentiments must be enlightened by intellect, but that intellect is dark, and needs to be enlightened by revelation." Our correspondent says—"Will you be so good as to inform me, by a line in the Journal, in what part of the phrenological theory it is laid down that 'intellect itself is dark, and needs to be enlightened by revelation.' I do not deny the principle, I only wish to know where and how it is maintained; for having read a good deal on the subject of Phrenology, I do not recollect any such assertion in any of the authorities." Nor do we.

Communications for the Editor (prepaid) may be addressed to Mr ROBERT COX, 25 Rutland Street, Edinburgh. Books or parcels, too heavy for the post, may be left (free of expense) with the London publishers, Messrs Simpkin, Marshall, & Co., Stationers' Hall Court.—Articles intended for the next following Number must always be with the Editor *six weeks before the day of publication*. Communications for the section of "INTELLIGENCE," and also Advertisements, should be in hand at least a fortnight before the same day. Charges for advertising:—Eight lines, 6s.; twelve lines, 7s. 6d.; every additional line, 6d.; half a page, 14s.; a whole page, 25s. Advertisements may be sent to the publishers in Edinburgh or London.

EDINBURGH, 1st October 1845.

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